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FILE COVERS 1947 - 1 May 2001 VOL 134 ISS 19
FILE LAST UPDATED: 30 Apr 2001 (20010430/ED)

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=> D QUE

L4 46 SEA FILE=REGISTRY ABB=ON (10043-11-5/BI OR 10108-64-2/BI OR
10124-54-6/BI OR 10294-26-5/BI OR 10402-24-1/BI OR 12138-09-9/B
I OR 124448-23-3/BI OR 12597-70-5/BI OR 12597-71-6/BI OR
12684-19-4/BI OR 12704-93-7/BI OR 127289-34-3/BI OR 1303-96-4/B
I OR 1314-13-2/BI OR 1317-33-5/BI OR 1319-46-6/BI OR 1327-33-9/
BI OR 14807-96-6/BI OR 150523-07-2/BI OR 159074-52-9/BI OR
186270-48-4/BI OR 186270-50-8/BI OR 186270-52-0/BI OR 25014-41-
9/BI OR 52292-17-8/BI OR 57175-99-2/BI OR 598-63-0/BI OR
64176-75-6/BI OR 7429-90-5/BI OR 7439-92-1/BI OR 7439-97-6/BI
OR 7440-22-4/BI OR 7440-28-0/BI OR 7440-29-1/BI OR 7440-31-5/BI
OR 7440-44-0/BI OR 7440-50-8/BI OR 7440-55-3/BI OR 7440-57-5/B
KATHLEEN FULLER EIC 1700 308-4290

I OR 7440-74-6/BI OR 7646-79-9/BI OR 77-90-7/BI OR 7779-90-0/BI
OR 7782-42-5/BI OR 7790-80-9/BI OR 9003-05-8/BI)

L5 9 SEA FILE=REGISTRY ABB=ON L4 AND PMS/CI
L6 2 SEA FILE=REGISTRY ABB=ON L5 AND 1-4/N
L7 6 SEA FILE=REGISTRY ABB=ON AQUASORB ?/CN
L8 3 SEA FILE=REGISTRY ABB=ON (AQUASTORE/CN OR "AQUASTORE B"/CN OR
"AQUASTORE F"/CN)
L9 1 SEA FILE=REGISTRY ABB=ON "TERRA-SORB GB"/CN
L10 3 SEA FILE=REGISTRY ABB=ON ("WATER LOCK SUPERABSORBENT POLYMER
A 100"/CN OR "WATER LOCK SUPERABSORBENT POLYMER A 200"/CN OR
"WATER LOCK SUPERABSORBENT POLYMER G 100"/CN)
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L12 4 SEA FILE=REGISTRY ABB=ON STOCKOSORB ?/CN
L13 1 SEA FILE=REGISTRY ABB=ON "FAVOR CA 100"/CN
L14 5 SEA FILE=REGISTRY ABB=ON ARIDALL ?/CN
L15 34 SEA FILE=REGISTRY ABB=ON SANWET ?/CN
L16 8 SEA FILE=REGISTRY ABB=ON ALCOSORB ?/CN
L17 44 SEA FILE=REGISTRY ABB=ON L4 NOT L6
L18 103 SEA FILE=REGISTRY ABB=ON L17 OR (L7 OR L8 OR L9 OR L10 OR L11
OR L12 OR L13 OR L14 OR L15 OR L16)
L19 246454 SEA FILE=REGISTRY ABB=ON ~~PACR/PCT~~ *polymer class term of polyacrylics*
L20 246454 SEA FILE=REGISTRY ABB=ON L19 OR L19
L21 80000 SEA FILE=REGISTRY RAN=(163035-34-5,) ABB=ON L19 OR L19
L22 86455 SEA FILE=REGISTRY RAN=(,114859-25-5) ABB=ON L19 OR L19
L23 79999 SEA FILE=REGISTRY ABB=ON L20 NOT (L21 OR L22)
L24 29277 SEA FILE=HCAPLUS ABB=ON L21
L25 270857 SEA FILE=HCAPLUS ABB=ON L22
L26 38382 SEA FILE=HCAPLUS ABB=ON L23
L27 1183207 SEA FILE=HCAPLUS ABB=ON L18
L28 32138 SEA FILE=HCAPLUS ABB=ON (L24 OR L25 OR L26) AND L27
L32 1213 SEA FILE=HCAPLUS ABB=ON ?ACRYL? AND LUBRICANT?(S) (COMPOSITION?
OR COMPNS)
L33 864 SEA FILE=HCAPLUS ABB=ON (L24 OR L25 OR L26) AND LUBRICANT?(S) (
COMPOSITION? OR COMPNS)
L34 132 SEA FILE=HCAPLUS ABB=ON (L32 OR L33) AND FRICTION?
L35 27 SEA FILE=HCAPLUS ABB=ON L34 AND L28
L36 55 SEA FILE=HCAPLUS ABB=ON L34 AND MOA/RL
L37 37 SEA FILE=HCAPLUS ABB=ON L34 AND (SOLID(W)LUBRICANT? OR
ANTIOXID? OR RUST?(3A)INHIBIT? OR ANTIWEAR? OR DETERGENT? OR
DISPERSANT? OR PRESSURE OR FOAM?(3A)INHIBIT?)
L38 1 SEA FILE=HCAPLUS ABB=ON L34 AND SUPERABSORB?
L39 92 SEA FILE=HCAPLUS ABB=ON (L35 OR L36 OR L37 OR L38)
L40 24 SEA FILE=HCAPLUS ABB=ON L39 AND FUEL?/SC,SX
L41 21 SEA FILE=HCAPLUS ABB=ON L39 AND (WATER? OR H2O OR AQ OR
AQUEOUS)
L42 33 SEA FILE=HCAPLUS ABB=ON L39 AND (OIL# OR GREASE#)
L43 1 SEA FILE=HCAPLUS ABB=ON L39 AND (SLID? OR MOV?) (3A)SURFACE?
L44 51 SEA FILE=HCAPLUS ABB=ON (L40 OR L41 OR L42 OR L43)
L45 24 SEA FILE=HCAPLUS ABB=ON L39 AND C10M?/IC
L46 52 SEA FILE=HCAPLUS ABB=ON L44 OR L45

=> D L46 ALL 1-52 HITSTR

L46 ANSWER 1 OF 52 HCAPLUS COPYRIGHT 2001 ACS
AN 2001:172825 HCAPLUS
DN 134:208996
TI Thermoplastic resin compositions with improved sliding property and their
moldings
IN Yamada, Tomohisa; Sugiura, Motoyuki
PA Nippon Oil and Fats Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF

KATHLEEN FULLER EIC 1700 308-4290

DT Patent
 LA Japanese
 IC ICM C08L059-02
 ICS C08J005-16; C08L051-06; C08L067-02; C08L077-00; C08L081-02
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 37

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001064478	A2	20010313	JP 1999-241315	19990827
AB	The moldings comprise (A) 50-99% thermoplastic resins selected from polyoxymethylenes, polyamides, arom. polyesters, and poly(phenylene sulfides) and (B) 1-50% multiphase graft copolymers composed of 5-95% metallocene-catalyzed ethylene (co)polymer segments with 1 .times. 103-1 .times. 106 and 5-95% vinyl (co)polymer segments with Mw 1 .times. 103-1 .times. 106 where one segments are dispersed in the other segments at the particle size 0.001-10 .mu.m. Thus, a compn. contg. 90% Delrin 100 (polyoxymethylene) and 10% acrylonitrile -ethylene-styrene graft copolymer [acrylonitrile -styrene polymer segments with particle size 0.3-0.4 .mu.m are dispersed in Sumikathene E-FV 404 (ethylene polymer) segment matrix] was kneaded and injection-molded to give a test piece with Izod impact strength 10 kg-cm/cm, deflection temp. under load (JIS K 7207) 160.degree., dynamic friction coeff. 0.15, and good abrasion resistance.				
ST	thermoplastic blend multiphase graft copolymer sliding; impact abrasion resistance thermoplastic blend molding; polyoxymethylene acrylonitrile ethylene styrene graft copolymer blend				
IT	Polysiloxanes, uses RL: MOA (Modifier or additive use); USES (Uses) (lubricant; thermoplastic resin compns. with improved sliding property and impact and abrasion resistance for moldings)				
IT	Abrasion-resistant materials Impact-resistant materials (thermoplastic resin compns. with improved sliding property and impact and abrasion resistance for moldings)				
IT	Polyamides, uses Polyesters, uses Polyoxymethylenes, uses Polythiophenylenes RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (thermoplastic resin compns. with improved sliding property and impact and abrasion resistance for moldings)				
IT	Polymer blends RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (thermoplastic resin compns. with improved sliding property and impact and abrasion resistance for moldings)				
IT	Molded plastics, uses RL: TEM (Technical or engineered material use); USES (Uses) (thermoplastic resin compns. with improved sliding property and impact and abrasion resistance for moldings)				
IT	2778-96-3, Unister M 9676 31900-57-9D, Dimethylsilanediol homopolymer, trimethylsilyl-terminated 42557-10-8, SH 200 127273-66-9, Daphne Super Mechanic Oil 100 RL: MOA (Modifier or additive use); USES (Uses) (lubricant; thermoplastic resin compns. with improved sliding property and impact and abrasion resistance for moldings)				
IT	108388-97-2P 116223-96-2P 328530-06-9P 328530-07-0P RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)				

KATHLEEN FULLER EIC 1700 308-4290

(multiphase; thermoplastic resin compns. with improved sliding property and impact and abrasion resistance for moldings)

IT 24968-12-5, UBE PBT 1000 25038-54-4, MC 100L, uses 26062-94-2, 1,4-Butanediol-terephthalic acid copolymer 94947-58-7, Delrin 100 328916-56-9, Sumikon FM-MK 104

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(thermoplastic resin compns. with improved sliding property and impact and abrasion resistance for moldings)

IT 116223-96-2P 328530-07-0P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(multiphase; thermoplastic resin compns. with improved sliding property and impact and abrasion resistance for moldings)

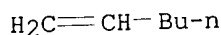
RN 116223-96-2 HCAPLUS

CN 2-Propenenitrile, polymer with ethene, ethenylbenzene and 1-hexene, graft (9CI) (CA INDEX NAME)

CM 1

CRN 592-41-6

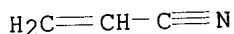
CMF C6 H12



CM 2

CRN 107-13-1

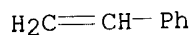
CMF C3 H3 N



CM 3

CRN 100-42-5

CMF C8 H8



CM 4

CRN 74-85-1

CMF C2 H4

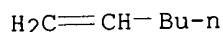


RN 328530-07-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with ethene, ethenylbenzene and 1-hexene, graft (9CI) (CA INDEX NAME)

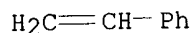
CM 1

CRN 592-41-6
CMF C6 H12



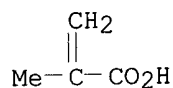
CM 2

CRN 100-42-5
CMF C8 H8



CM 3

CRN 79-41-4
CMF C4 H6 O2



CM 4

CRN 74-85-1
CMF C2 H4



L46 ANSWER 2 OF 52 HCAPLUS COPYRIGHT 2001 ACS
AN 2000:476089 HCAPLUS
DN 133:61180
TI **Composition of lubricant** for automobile engine
IN Liang, Huifeng; Li, Jianhua
PA Bailiwei Science & Technology Development Center, Beijing, Peop. Rep.
China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 7 pp.
CODEN: CNXXEV
DT Patent
LA Chinese
IC ICM **C10M161-00**
CC 51-8 (Fossil **Fuels**, Derivatives, and Related Products)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1232080	A	19991020	CN 1998-101372	19980416
AB	<p>The raw material of the lubricant is composed of viscosity index improver 5-8, borate ester 2-10, phenylates 8-10, org. Mo compd. -6, org. S compd. 15-20, chlorinated paraffin 10-20, org. phosphate 5-10, high base no. sulfonate 8-10, and mineral oil 20-30%. The viscosity index improver is selected from polyisobutene, ethylene-propylene copolymer, polymethacrylate, hydrostyrene-diolefin copolymer; the borate ester from Me borate, Et borate, Pr borate, tricresyl borate, and lauryl</p> <p>KATHLEEN FULLER EIC 1700 308-4290</p>				

borate; the org. Mo compd. from Mo dithiocarbamate, Mo dithiophosphate or dialkyldithiophosphate; the S compd. from vulcanized animal oil, vulcanized hydrocarbon, vulcanized ester, and polysulfide; the phenylates from one or more of di-Ph ether, di-Me di-Ph ether, di-Et di-Ph ether, and lauryl di-Ph ether; the phosphate from malonic phosphate or cyclovaleric phosphate; and the sulfonate from one or more of Ca sulfonate, Mg sulfonate, Ba sulfonate, and Na sulfonate. The lubricant can reduce abrasion of automobile engine and lengthen its the work life.

ST lubricant engine automobile **friction** improver

IT Sulfonic acids, uses
 RL: **MOA (Modifier or additive use); USES (Uses)**
 (calcium and barium and magnesium salts; **compn.** of lubricant for automobile engine)

IT Antifriction materials
 Automobiles
Lubricants
 (compn. of lubricant for automobile engine)

IT Alkanes, uses
 Paraffin oils
 Polysulfides
 RL: **MOA (Modifier or additive use); USES (Uses)**
 (compn. of lubricant for automobile engine)

IT Lubricating oils
 (gear oils; compn. of lubricant for automobile engine)

IT Sulfonic acids, uses
 RL: **MOA (Modifier or additive use); USES (Uses)**
 (sodium salts; compn. of lubricant for automobile engine)

IT 101-84-8, Diphenyl ether 101-84-8D, Benzene, 1,1'-oxybis-, mono and bis(branched and linear lauryl) derivs. 594-07-0D, Dithiocarbamic acid, Molybdenum salts 688-71-1, Propyl borate 2467-15-4, Lauryl borate 9003-27-4, Polyisobutene 9010-79-1, Ethylene-propylene copolymer 25087-26-7, Polymethacrylic acid 26248-41-9, Tricresyl borate 28299-41-4, Dimethyl diphenyl ether 37210-98-3, Methyl borate 40574-71-8, Diethyl diphenyl ether 51845-86-4, Ethyl borate 72579-09-0, Molybdenum dithiophosphate
 RL: **MOA (Modifier or additive use); USES (Uses)**
 (compn. of lubricant for automobile engine)

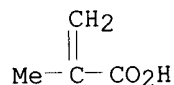
IT 25087-26-7, Polymethacrylic acid
 RL: **MOA (Modifier or additive use); USES (Uses)**
 (compn. of lubricant for automobile engine)

RN 25087-26-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 79-41-4
 CMF C4 H6 O2



L46 ANSWER 3 OF 52 HCAPLUS COPYRIGHT 2001 ACS
 AN 2000:476087 HCAPLUS
 DN 133:61178
 TI **Composition of lubricant for vehicle gear**
 IN Liang, Huifeng; Li, Jianhua
 PA Bailiwei Science & Technology Development Center, Beijing, Peop. Rep. China

KATHLEEN FULLER EIC 1700 308-4290

SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.
 CODEN: CNXXEV
 DT Patent
 LA Chinese
 IC ICM C10M137-04
 CC 51-8 (Fossil Fuels, Derivatives, and Related Products)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1232078	A	19991020	CN 1998-101374	19980416
AB	The raw material of the lubricant comprises viscosity-index improver 25-30, friction improver 4-8, oiliness agent 4-6, halogenated extreme-pressure antiwear agent 5-12, high-base no. sulfonate 10-20, and mineral oil 30-50%. The viscosity-index improver is selected from polyisobutene, ethylene-propylene copolymer, polymethacrylate , hydrostyrene-diolefin copolymer; the friction improver from phosphate, phosphite ester, ammonium thiophosphate, Zn dialkyldithiophosphate, and Mo oxodialkyldothiophosphate; the oiliness agent from vulcanized whale oil, vulcanized cottonseed oil, vulcanized turpentine, vulcanized lard, and vulcanized olefin-cottonseed oil; the antiwear agent from chlorinated paraffin, chlorinated whale oil, chlorinated kerosene, and chlorinated naphthalene; and the sulfonate from Ca sulfonate. The lubricant can reduce abrasion of vehicle gears and lengthen its work life.				
ST	lubricant vehicle gear friction improver				
IT	Paraffin waxes, uses RL: NUU (Nonbiological use, unclassified); USES (Uses) (antiwear agent; lubricant for vehicle gear contg.)				
IT	Sulfonic acids, uses RL: MOA (Modifier or additive use); USES (Uses) (calcium salts; lubricant for vehicle gear contg.)				
IT	Kerosene RL: MOA (Modifier or additive use); USES (Uses) (chlorinated; lubricant for vehicle gear contg.)				
IT	Lubricants (compn. of lubricant for vehicle gear)				
IT	Antifriction materials (lubricant for vehicle gear contg.)				
IT	Cottonseed oil Paraffin oils Turpentine oil RL: NUU (Nonbiological use, unclassified); USES (Uses) (lubricant for vehicle gear contg.)				
IT	Fats and Glyceridic oils, uses RL: MOA (Modifier or additive use); USES (Uses) (whale, chlorinated; lubricant for vehicle gear contg.)				
IT	91-20-3D, Naphthalene, chlorinated 72579-09-0D, Molybdenum dithiophosphate, dialkyl derivs. RL: MOA (Modifier or additive use); USES (Uses) (lubricant for vehicle gear contg.)				
IT	9003-27-4, Polyisobutene 9010-79-1, Ethylene-propylene copolymer 15834-33-0D, Phosphorodithioic acid, derivs., amine salts 19210-06-1D, Zinc dithiophosphate, dialkyl derivs. RL: MOA (Modifier or additive use); USES (Uses) (viscosity-index improver; lubricant for vehicle gear contg.)				

L46 ANSWER 4 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 2000:59233 HCAPLUS

DN 132:96932

TI Glassy carbon-containing **friction** material compositions, their manufacture, and materials obtained from them

IN Kikuchi, Makoto; Shiga, Masamichi; Kato, Takanori

PA Hitachi Chemical Co., Ltd., Japan

KATHLEEN FULLER EIC 1700 308-4290

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09K003-14

ICS C09K003-14; C08J005-14; C08K003-04; C08K003-38; C08L021-02;
C08L101-00; F16D069-00; F16D069-02

CC 57-8 (Ceramics)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000026839	A2	20000125	JP 1998-191108	19980707
AB	The compns. contain (A) glassy C 0.25-23, (B) B carbide 0.03-13, and (C) liq. polymers or rubbers 0.55-23 wt.%. The compns. are manufd. by kneading A, B, and C and then mixing the resulting compns. with binders, reinforcement fibers, fillers, and lubricants . The materials are obtained by hot pressing the compns. The materials give disk brake pads showing stable friction coeff. and good crack, noise, and judder resistance.				
ST	glassy carbon boron carbide friction material; brake pad glassy carbon boron carbide				
IT	Nitrile rubber, uses RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses) (Krynac PXL 38-20, fillers; compns. contg. glassy carbon and boron carbide for noise- and judder-free friction materials)				
IT	Styrene-butadiene rubber, uses RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses) (Nipol LX 139, coatings; compns. contg. glassy carbon and boron carbide for noise- and judder-free friction materials)				
IT	Polyamide fibers, uses RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses) (aramid, Kevlar, reinforcements; compns. contg. glassy carbon and boron carbide for noise- and judder-free friction materials)				
IT	Phenolic resins, uses RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses) (binders; compns. contg. glassy carbon and boron carbide for noise- and judder-free friction materials)				
IT	Friction materials (brake; compns. contg. glassy carbon and boron carbide for noise- and judder-free friction materials)				
IT	Fats and Glyceridic oils , uses RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses) (cashew nutshell, polymd., dust, fillers; compns. contg. glassy carbon and boron carbide for noise- and judder-free friction materials)				
IT	Synthetic fibers (ceramic, Fineflex Bulk fiber, reinforcements; compns. contg. glassy carbon and boron carbide for noise- and judder-free friction materials)				
IT	Metallic fibers RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses) (copper, reinforcements; compns. contg. glassy carbon and boron carbide for noise- and judder-free friction materials)				
IT	Brakes (mechanical) (disk, pads; compns. contg. glassy carbon and boron carbide for noise- and judder-free friction materials)				
IT	Ceramics (fibers, Fineflex Bulk fiber, reinforcements; compns. contg. glassy				

KATHLEEN FULLER EIC 1700 308-4290

carbon and boron carbide for noise- and judder-free **friction** materials)

IT 161544-42-9, HP 491UP
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(binders; compns. contg. glassy carbon and boron carbide for noise- and judder-free **friction** materials)

IT 12069-32-8, Boron carbide
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(compns. contg. glassy carbon and boron carbide for noise- and judder-free **friction** materials)

IT 7440-50-8, Copper, uses
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(fibers, reinforcements; compns. contg. glassy carbon and boron carbide for noise- and judder-free **friction** materials)

IT 7631-86-9, Silica, uses 7727-43-7, Barium sulfate 161051-76-9, H 101
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(fillers; compns. contg. glassy carbon and boron carbide for noise- and judder-free **friction** materials)

IT 7440-44-0P, Glassy carbon, preparation
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(glassy; compns. contg. glassy carbon and boron carbide for noise- and judder-free **friction** materials)

IT 7782-42-5, CB 150, uses
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(lubricants; compns. contg. glassy carbon and boron carbide for noise- and judder-free **friction** materials)

IT 9003-18-3
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(nitrile rubber, Krynac PXL 38-20, fillers; compns. contg. glassy carbon and boron carbide for noise- and judder-free **friction** materials)

IT 9003-55-8
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(styrene-butadiene rubber, Nipol LX 139, coatings; compns. contg. glassy carbon and boron carbide for noise- and judder-free **friction** materials)

IT 7440-50-8, Copper, uses
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(fibers, reinforcements; compns. contg. glassy carbon and boron carbide for noise- and judder-free **friction** materials)

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IT 7440-44-0P, Glassy carbon, preparation
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(glassy; compns. contg. glassy carbon and boron carbide for noise- and judder-free **friction** materials)

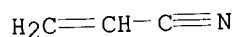
RN 7440-44-0 HCAPLUS
CN Carbon (7CI, 8CI, 9CI) (CA INDEX NAME)

C

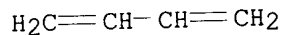
IT 7782-42-5, CB 150, uses
 RL: DEV (Device component use); MOA (Modifier or additive use);
 USES (Uses)
 (lubricants; compns. contg. glassy carbon and boron
 carbide for noise- and judder-free friction materials)
 RN 7782-42-5 HCAPLUS
 CN Graphite (8CI, 9CI) (CA INDEX NAME)

C

IT 9003-18-3
 RL: DEV (Device component use); MOA (Modifier or additive use);
 USES (Uses)
 (nitrile rubber, Krynac PXL 38-20, fillers; compns. contg. glassy
 carbon and boron carbide for noise- and judder-free friction
 materials)
 RN 9003-18-3 HCAPLUS
 CN 2-Propenenitrile, polymer with 1,3-butadiene (9CI) (CA INDEX NAME)
 CM 1
 CRN 107-13-1
 CMF C3 H3 N



CM 2
 CRN 106-99-0
 CMF C4 H6



L46 ANSWER 5 OF 52 HCAPLUS COPYRIGHT 2001 ACS
 AN 1999:205299 HCAPLUS
 DN 130:254745
 TI Multifunctional lubricant additive
 IN Zhang, Ruiming; Hooks, Robert M.
 PA NCH Corporation, USA
 SO U.S., 5 pp.
 CODEN: USXXAM

DT Patent
 LA English
 IC ICM C10M141-12
 NCL 508184000

CC 51-8 (Fossil Fuels, Derivatives, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5885942	A	19990323	US 1997-935394	19970923
	EP 905221	A1	19990331	EP 1997-402290	19971001

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 KATHLEEN FULLER EIC 1700 308-4290

IE, FI

PRAI US 1997-935394 19970923

AB The multifunctional **lubricant** additive **compns.** of the invention preferably contain a methylene bis(dibutyldithiocarbamate) as an **antiwear** and extreme **pressure** additive, a 2,5-dimercapto-1,3,4-thiadiazole deriv. as an **antioxidant** and **antiwear** additive, a tolutriazole compd. as an **antioxidant** and corrosion inhibitor, a glycerol monooleate as a **friction** modifier, a calcium sulfonate as a **detergent** and extreme **pressure** additive, a zinc dialkyl dithiophosphate as an **antiwear** and **antioxidant** additive, a **polymethylacrylate** as a **dispersant**, a polyol ester as a carrier and **friction** modifier, a red dye for leak detection, and optionally, solvent neutral **oil** and a pour point depressant.

ST multifunctional lubricant additive

IT Fatty acids, uses

RL: **MOA (Modifier or additive use); USES (Uses)**
(C5-9; multifunctional lubricant additive)

IT Polyhydric alcohols

RL: **MOA (Modifier or additive use); USES (Uses)**
(esters; multifunctional lubricant additive)

IT **Acrylic** polymers, uses

Calcium sulfonates

RL: **MOA (Modifier or additive use); USES (Uses)**
(multifunctional lubricant additive)

IT Lubricating **oil** additives

(multifunctional; multifunctional lubricant additive)

IT 115-77-5D, Pentaerythritol, tetraesters 126-58-9D, Dipentaerythritol, hexaesters of C5-9 fatty acids 136-85-6D, Tolutriazole, derivs. 1072-71-5D, 2,5-Dimercapto-1,3,4-thiadiazole, derivs. 2653-64-7, **Oil Red B** 10254-57-6, Vanlube 7723 15834-33-0D, Dithiophosphoric acid, alkyl derivs., zinc salt 25496-72-4, Glycerol monooleate 53321-12-3, **Acryloid** 954 77907-76-7, Lubrizol 1395 107028-42-2, Lubrizol 78 107231-96-9, Lubrizol 6662 192230-84-5, Vanlube 871 221450-58-4, Vanlube 877E 221450-61-9, Hatcol 2954 221450-91-5, Vanlube 887

RL: **MOA (Modifier or additive use); USES (Uses)**
(multifunctional lubricant additive)

RE.CNT 18

RE

- (1) Anon; EP 0045827 1982 HCAPLUS
- (2) Anon; EP 0593263 A1 1994 HCAPLUS
- (3) Anon; EP 0761805 A2 1997 HCAPLUS
- (4) Brewster; US 4683069 1987 HCAPLUS
- (5) Brown; US 5152926 1992 HCAPLUS
- (6) Clarke; US 5622922 1997 HCAPLUS
- (7) Dasai; US 5516440 1996 HCAPLUS
- (8) Doe; US 4880551 1989 HCAPLUS
- (9) Francisco; US 5422023 1995 HCAPLUS
- (10) Harris; US 4022700 1977 HCAPLUS
- (11) Hata; US 4609480 1986 HCAPLUS
- (12) Hutchison; US 4871465 1989 HCAPLUS
- (13) Militec Inc; Product Information for Militec-1 undated
- (14) Newingham; US 3923669 1975 HCAPLUS
- (15) Orelup; US 4049393 1977 HCAPLUS
- (16) Shaub; US 4105571 1978 HCAPLUS
- (17) Slick 50 Products Corp; Product Brochure for Slick 50 undated
- (18) Tochigi; US 5094763 1992 HCAPLUS

L46 ANSWER 6 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1998:742193 HCAPLUS

DN 130:14738

TI Compositions containing styrene polymers and paraffin wax for resistance to markings caused by **friction**

KATHLEEN FULLER EIC 1700 308-4290

IN Dumont, Jean-Marie
 PA General Electric Company, USA
 SO Eur. Pat. Appl., 8 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM C08L025-04
 ICS C08L025-12; C08L055-02; C08L091-00
 ICI C08L025-12, C08L055-02
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 37

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 877054	A1	19981111	EP 1998-303214	19980424
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	FR 2763075	A1	19981113	FR 1997-5580	19970506
	FR 2763075	B1	19990723		
	JP 11021399	A2	19990126	JP 1998-117640	19980428
	CN 1202504	A	19981223	CN 1998-114819	19980506
PRAI	FR 1997-5580		19970506		
AB	Compns. contg. styrene polymers, styrene copolymers or their blends and articles molded from these compns. having an increased resistance to surface marking comprise, with respect to the total wt. of the polymers and/or copolymers present in the compns .. (a) less than 0.5% of internal lubricant , and (b) 3 to 10% of paraffin. Thus, plates molded from a formulation comprising 15 parts ABS, 85 parts SAN, 5 parts paraffin wax, 0.08 part antistatic agent Noroplast 832, 0.1 part silicone oil , 8 parts titanium oxide, and 0.58 part Sicotan K 2107 yellow were rubbed with the corner of another plate of the same compn. 3 to 4 times at different points and gave a mark 0.2 mm in width, compared to 1.5 for plates molded from a similar formulation with 2 parts paraffin wax and 2.5 parts ethylene bis(stearamide) wax.				
ST	marking resistant styrene polymer blend; styrene copolymer blend paraffin wax lubricant; friction resistance styrene polymer molding; lubricant paraffin external silicone internal molding				
IT	Antifriction materials				
	Lubricants				
	(compns. contg. styrene polymers and an effective amt. of paraffin wax for resistance to markings caused by friction)				
IT	Paraffin waxes, uses				
	RL: MOA (Modifier or additive use) ; USES (Uses)				
	(compns. contg. styrene polymers and an effective amt. of paraffin wax for resistance to markings caused by friction)				
IT	Styrene-butadiene rubber, uses				
	RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)				
	(compns. contg. styrene polymers and an effective amt. of paraffin wax for resistance to markings caused by friction)				
IT	Marking				
	(resistance to; compns. contg. styrene polymers and an effective amt. of paraffin wax for resistance to markings caused by friction)				
IT) 9003-54-7, Acrylonitrile -styrene copolymer 9003-55-8, Butadiene-Styrene copolymer 9003-56-9, ABS copolymer 9010-94-0, Acrylonitrile -butadiene-methyl methacrylate -styrene copolymer 9011-13-6, Maleic anhydride-styrene copolymer 25053-09-2, Butadiene-methyl methacrylate -styrene copolymer 27812-34-6, Acrylonitrile -maleic anhydride-styrene copolymer 106974-54-3, Butadiene-styrene graft copolymer RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)				

KATHLEEN FULLER EIC 1700 308-4290

(compsns. contg. styrene polymers and an effective amt. of paraffin wax for resistance to markings caused by **friction**)

IT 9003-55-8
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (styrene-butadiene rubber, compsns. contg. styrene polymers and an effective amt. of paraffin wax for resistance to markings caused by **friction**)

RE.CNT 5

RE

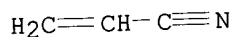
- (1) Anon; Research Disclosure 1983, V234(23416), P316
- (2) Hitachi Chemical Co, Ltd; JP 53119949 A 1978 HCAPLUS
- (3) I G Farbenindustrie AG; DE 487707 C 1929
- (4) Idemitsu Petrochemical Co; EP 0767211 A 1997 HCAPLUS
- (5) Nakayama, K; JP 61148253 A HCAPLUS

IT 9003-54-7, **Acrylonitrile**-styrene copolymer
 9003-56-9, ABS copolymer 9010-94-0,
Acrylonitrile-butadiene-methyl **methacrylate**-styrene
 copolymer 25053-09-2, Butadiene-methyl **methacrylate**
 -styrene copolymer 27812-34-6, **Acrylonitrile**-maleic
 anhydride-styrene copolymer
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (compsns. contg. styrene polymers and an effective amt. of paraffin wax for resistance to markings caused by **friction**)

RN 9003-54-7 HCAPLUS
 CN 2-Propenenitrile, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

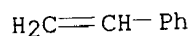
CM 1

CRN 107-13-1
 CMF C3 H3 N



CM 2

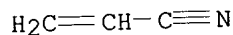
CRN 100-42-5
 CMF C8 H8



RN 9003-56-9 HCAPLUS
 CN 2-Propenenitrile, polymer with 1,3-butadiene and ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 107-13-1
 CMF C3 H3 N

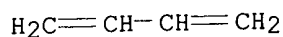


CM 2

CRN 106-99-0

KATHLEEN FULLER EIC 1700 308-4290

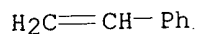
CMF C4 H6



CM 3

CRN 100-42-5

CMF C8 H8



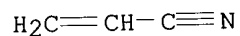
RN 9010-94-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,3-butadiene,
ethenylbenzene and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 107-13-1

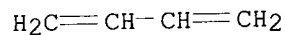
CMF C3 H3 N



CM 2

CRN 106-99-0

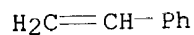
CMF C4 H6



CM 3

CRN 100-42-5

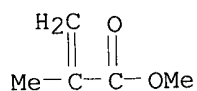
CMF C8 H8



CM 4

CRN 80-62-6

CMF C5 H8 O2

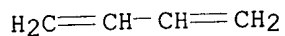


RN 25053-09-2 HCAPLUS

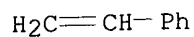
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 1,3-butadiene and
ethenylbenzene (9CI) (CA INDEX NAME)

KATHLEEN FULLER EIC 1700 308-4290

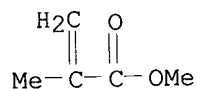
CM 1

CRN 106-99-0
CMF C4 H6

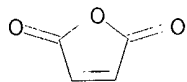
CM 2

CRN 100-42-5
CMF C8 H8

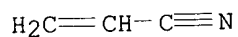
CM 3

CRN 80-62-6
CMF C5 H8 O2RN 27812-34-6 HCAPLUS
CN 2-Propenenitrile, polymer with ethenylbenzene and 2,5-furandione (9CI)
(CA INDEX NAME)

CM 1

CRN 108-31-6
CMF C4 H2 O3

CM 2

CRN 107-13-1
CMF C3 H3 N

CM 3

CRN 100-42-5
CMF C8 H8

$\text{H}_2\text{C}=\text{CH}-\text{Ph}$

L46 ANSWER 7 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1998:653758 HCAPLUS

DN 129:278341

TI **Lubricant compositions** for automatic transmissions

IN Yoshimura, Narihiko; Kugimiya, Takanori; Nakada, Takanori; Ueda, Fumio; Ando, Yasushi

PA TONEN CORPORATION, Japan

SO Eur. Pat. Appl., 20 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C10M141-10

ICS C10M161-00; C10M165-00; C10M167-00

ICI C10M167-00, C10M129-10, C10M129-54, C10M133-16, C10M133-56, C10M135-10, C10M135-30, C10M137-02, C10M137-04, C10M149-18, C10M159-22, C10M159-24; C10N010-04, C10N040-04

CC 51-8 (Fossil **Fuels**, Derivatives, and Related Products)

FAN.CNT 1

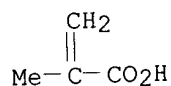
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 867498	A1	19980930	EP 1998-105304	19980324
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 10265793	A2	19981006	JP 1997-88797	19970324
	US 5922656	A	19990713	US 1998-46091	19980323
PRAI	JP 1997-88797		19970324		
OS	MARPAT 129:278341				
AB	<p>The lubricant compn. of the present invention can be used in automatic transmissions and contains 0.05 to 2% of an alk.-earth metal salt of org. acid (component (A)), such as calcium sulfonate, 0.15 to 4% of a specific polyamide compd. (component (B)) and 0.05 to 1.5% of acid phosphate or acid phosphite ester (component (C)) which are added to a lubricant base oil, wherein all percentages are by wt. in the total lubricant compn. The lubricant compn. for automatic transmissions can show high anti-shudder property, high anti-shudder durability for an extended period, high property of preventing clogging of the friction material, and sufficient transmission torque capacity, while retaining the lubricant characteristic requirements for use in automatic transmissions.</p>				
ST	lubricant automatic transmission				
IT	Transmissions (mechanical) (automotive, automatic; lubricant compns. for automatic transmissions)				
IT	Lubricating oils (lubricant compns. for automatic transmissions)				
IT	Calcium sulfonates Polyolefins RL: MOA (Modifier or additive use); USES (Uses) (lubricant compns. for automatic transmissions)				
IT	Automobile parts (transmissions, automatic; lubricant compns. for automatic transmissions)				
IT	95-14-7, 1H-Benzotriazole 122-39-4D, Diphenyl amine, alkylated 123-56-8D, Succinimide, polyisobutenyl derivs. 128-39-2, 2,6-Di-tert. butyl phenol 12645-31-7, 2-Ethylhexyl acid phosphate 25087-26-7 , Polymethacrylic acid 213978-11-1, Polyamide A 2 RL: MOA (Modifier or additive use); USES (Uses) (lubricant compns. for automatic transmissions)				
IT	25087-26-7, Polymethacrylic acid KATHLEEN FULLER EIC 1700 308-4290				

RL: MOA (Modifier or additive use); USES (Uses)
(lubricant compns. for automatic transmissions)

RN 25087-26-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 79-41-4
CMF C4 H6 O2



L46 ANSWER 8 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1998:361059 HCAPLUS

DN 129:28761

TI Vinyl chloride polymer compositions for lightweight products with good moldability, appearance, **water** repellency, and sliding property

IN Oishi, Mitsuharu; Noda, Yoshiharu

PA Shin-Etsu Polymer Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L027-06

ICS C08K007-28; C08L027-06; C08L033-12

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10152591	A2	19980609	JP 1996-314524	19961126
AB	Title compns. , useful for packing materials, fishing line, etc. (no data), comprise vinyl chloride polymers 100, glass microballoons 20-200, plasticizers 10-200, Me methacrylate copolymers 1-20, and lubricants 0.1-5 parts. Thus, TK 1300 [poly(vinyl chloride)] 100, Glass Bubbles S 60 (glass microballoon) 40, di-n-octyl phthalate 50, epoxidized soybean oil 3, Metablen P 551A (Me methacrylate copolymer) 2, Ba-Zn stabilizer 3, and KF 54 (silicone oil) 1 part were blended, pelletized, and molded to give test pieces showing sp. gr. 0.82, good appearance, coeff. of static friction 0.53, coeff. of dynamic friction 0.35, and good water repellency.				
ST	polyvinyl chloride lightweight water repellency; sliding property PVC lightweight moldability; glass microballoon PVC compn polymethacrylate ; packing material PVC lightweight sliding; fishing line PVC lightweight sliding				
IT	Glass microspheres RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses) (Glass Bubbles S 60; PVC compns. for lightweight products with good moldability, appearance, water repellency, and sliding property)				
IT	Lubricants Packing materials (beds) Plasticizers (PVC compns. for lightweight products with good moldability, appearance, water repellency, and sliding property)				
IT	Sporting goods (fishing lines; PVC compns. for lightweight products with good				

KATHLEEN FULLER EIC 1700 308-4290

- IT moldability, appearance, **water** repellency, and sliding property)
 Epoxidized soybean oil
 RL: **MOA (Modifier or additive use)**; PRP (Properties); USES
 (Uses)
 (plasticizers; PVC compns. for lightweight products with good moldability, appearance, **water** repellency, and sliding property)
- IT 80-62-6D, Methyl **methacrylate**, polymers 31230-04-3, Methylphenylsilanediol homopolymer 158707-73-4, Metablen P 551A
 RL: **MOA (Modifier or additive use)**; PRP (Properties); USES
 (Uses)
 (PVC compns. for lightweight products with good moldability, appearance, **water** repellency, and sliding property)
- IT 9002-86-2, Poly(vinyl chloride)
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (PVC compns. for lightweight products with good moldability, appearance, **water** repellency, and sliding property)
- IT 9002-88-4, AC 6A 9005-12-3, KF 54
 RL: **MOA (Modifier or additive use)**; PRP (Properties); USES
 (Uses)
 (lubricants; PVC compns. for lightweight products with good moldability, appearance, **water** repellency, and sliding property)
- IT 117-81-7, DOP
 RL: **MOA (Modifier or additive use)**; PRP (Properties); USES
 (Uses)
 (plasticizers; PVC compns. for lightweight products with good moldability, appearance, **water** repellency, and sliding property)

L46 ANSWER 9 OF 52 HCAPLUS COPYRIGHT 2001 ACS
 AN 1998:180557 HCAPLUS
 DN 128:205967
 TI **Aqueous** lubricating coating composition for metals
 IN Murata, Masahiro; Kurihara, Toshio; Suehiro, Akira; Ikenoue, Syuichi
 PA Kansai Paint Co., Ltd., Japan
 SO U.S., 9 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC ICM C08K005-10
 NCL 524308000
 CC 42-7 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 56

FAN.CNT	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5726230	A	19980310	US 1995-546563	19951020
AB	<p>An aq. coating compn., esp. useful for coating cans, comprises a water-dispersible graft reaction product of an epoxy resin with an acrylic resin, prepd. from an .alpha.,.beta.-ethylenically unsatd. carboxylic acid and optionally another polymerizable unsatd. monomer, and an ester of polyglycerin ether with a (un)satd. fatty acid having 8-18 C atoms. A compn. contg. Epikote 828 based soln. 283, Et acrylate -methacrylic acid-styrene copolymer soln. 150, n-butanol 86, 2-butoxyethanol 47, dimethylaminoethanol 14.8, phenolic resin soln. 150, and water 466 parts was combined with 10 parts lauric ester of hexaglycerin ether (6:1 molar ratio) was applied onto Al panels and baked to give coated panels having good adhesion, coeff. of friction 0.05, processability <1 mA, and good boiling water resistance; vs. good, 0.43, .gtoreq.10 mA, and good, resp., for a coating without the ester.</p>				

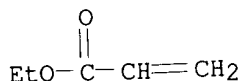
KATHLEEN FULLER EIC 1700 308-4290

- ST **acrylic** epoxy graft vehicle coating; **water** thinned lubricating coating can; processability **waterborne** coating can; boiling **water** resistance coating; crosslinkable **acrylic** epoxy resin coating; fatty ester glycerin ether lubricant
- IT **Water-thinned coatings**
(**acrylic** epoxy resin vehicle contg. ester **lubricant** ; **aq.** lubricating coating **compn.** for metals)
- IT Epoxy resins, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**acrylic**, graft; **aq.** lubricating coating **compn.** for metals)
- IT **Lubricants**
(fatty ester of polyglycerin; nonmigrating; **aq.** lubricating coating **compn.** for metals)
- IT **111202-37-0P**, Bisphenol A-epichlorohydrinethyl **acrylate-methacrylic** acid-styrene graft copolymer **161286-28-8P**, Bisphenol F-epichlorohydrin-ethyl **acrylate-methacrylic** acid-styrene graft copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**aq.** lubricating coating **compn.** for metals)
- IT **130293-42-4** **169702-41-4** **169702-42-5** **169702-43-6**
RL: **MOA (Modifier or additive use)**; USES (Uses)
(**aq.** lubricating coating **compn.** for metals)
- IT **7429-90-5**, Aluminum, miscellaneous
RL: MSC (Miscellaneous)
(**aq.** lubricating coating **compn.** for metals)
- IT **25085-75-0P**, Bisphenol A-formaldehyde copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(crosslinker; **aq.** lubricating coating **compn.** for metals)
- IT **25035-68-1P**, Ethyl **acrylate-methacrylic** acid-styrene copolymer
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation)
(in prepn. of graft resin vehicle; **aq.** lubricating coating **compn.** for metals)
- IT **111202-37-0P**, Bisphenol A-epichlorohydrinethyl **acrylate-methacrylic** acid-styrene graft copolymer **161286-28-8P**, Bisphenol F-epichlorohydrin-ethyl **acrylate-methacrylic** acid-styrene graft copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**aq.** lubricating coating **compn.** for metals)
- RN **111202-37-0** HCAPLUS
CN **2-Propenoic acid**, 2-methyl-, polymer with (chloromethyl)oxirane, ethenylbenzene, ethyl 2-propenoate and 4,4'-(1-methylethylidene)bis[phenol], graft (9CI) (CA INDEX NAME)

CM 1

CRN 140-88-5

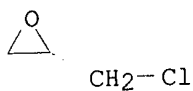
CMF C5 H8 O2



CM 2

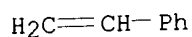
KATHLEEN FULLER EIC 1700 308-4290

CRN 106-89-8
CMF C3 H5 Cl O



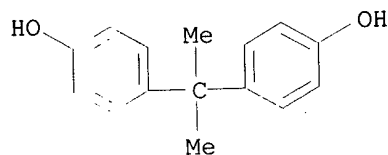
CM 3

CRN 100-42-5
CMF C8 H8



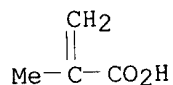
CM 4

CRN 80-05-7
CMF C15 H16 O2



CM 5

CRN 79-41-4
CMF C4 H6 O2



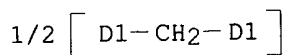
RN 161286-28-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with (chloromethyl)oxirane, ethenylbenzene, ethyl 2-propenoate and methylenebis[phenol], graft (9CI)
(CA INDEX NAME)

CM 1

CRN 1333-16-0
CMF C13 H12 O2
CCI IDS
CDES 8:ID

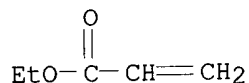


D1-OH



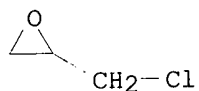
CM 2

CRN 140-88-5
CMF C5 H8 O2



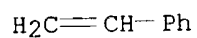
CM 3

CRN 106-89-8
CMF C3 H5 Cl O



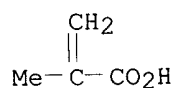
CM 4

CRN 100-42-5
CMF C8 H8



CM 5

CRN 79-41-4
CMF C4 H6 O2



IT 7429-90-5, Aluminum, miscellaneous

RL: MSC (Miscellaneous)

(aq. lubricating coating compn. for metals)

KATHLEEN FULLER EIC 1700 308-4290

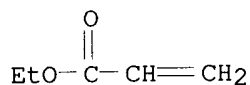
RN 7429-90-5 HCAPLUS
 CN Aluminum (8CI, 9CI) (CA INDEX NAME)

Al

IT 25035-68-1P, Ethyl acrylate-methacrylic
 acid-styrene copolymer
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation)
 (in prepn. of graft resin vehicle; **aq.** lubricating coating
 compn. for metals)
 RN 25035-68-1 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene and ethyl
 2-propenoate (9CI) (CA INDEX NAME)

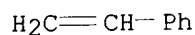
CM 1

CRN 140-88-5
 CMF C5 H8 O2



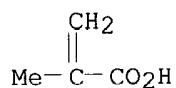
CM 2

CRN 100-42-5
 CMF C8 H8



CM 3

CRN 79-41-4
 CMF C4 H6 O2



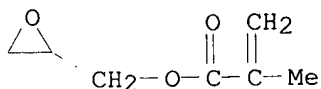
L46 ANSWER 10 OF 52 HCAPLUS COPYRIGHT 2001 ACS
 AN 1998:65543 HCAPLUS
 DN 128:115746
 TI Polyamide compositions with good sliding property
 IN Serizawa, Katsushi; Kashiwagi, Hiroyuki
 PA Nissan Motor Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C08L077-00
 ICS C08K003-04; C08L033-08; C10M169-02; F16C033-24;
 C10M107-50; C10M125-02; C10M149-06;
 C10N030-06; C10N040-04; C10N050-08
 KATHLEEN FULLER EIC 1700 308-4290

CC 37-6 (Plastics Manufacture and Processing)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10017766	A2	19980120	JP 1996-194051	19960705
AB	The title compns. , with dynamic friction coeff. <0.058 and useful for thrust washer, piston, seal ring, and gear of automobile transmission, etc. (no data), comprise polyamides (e.g., nylon 66, nylon 6T, nylon 612), (lubricant-swelled) acrylic polymer particles (e.g., of glycidyl methacrylate -Me methacrylate copolymer), and carbon black.				
ST	sliding part polyamide acrylic particle; carbon black polyamide sliding part; automobile transmission polyamide sliding part; lubricant swelled acrylic particle polyamide				
IT	Lubricating oils (acrylic particles swelled with; polyamide compns. with good sliding property)				
IT	Particles (of acrylic polymers; polyamide compns. with good sliding property)				
IT	Sliding parts (polyamide compns. with good sliding property)				
IT	Carbon black, uses RL: MOA (Modifier or additive use) ; TEM (Technical or engineered material use); USES (Uses) (polyamide compns. with good sliding property)				
IT	Polyamides, properties RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (polyamide compns. with good sliding property)				
IT	26141-88-8 , Glycidyl methacrylate -methyl methacrylate copolymer RL: MOA (Modifier or additive use) ; TEM (Technical or engineered material use); USES (Uses) (particles, lubricant-swelled ; polyamide compns. with good sliding property)				
IT	24936-74-1 , Nylon 612 24938-03-2 24938-70-3 , Nylon 6T 26098-55-5 32131-17-2 , Nylon 66, properties RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (polyamide compns. with good sliding property)				
IT	26141-88-8 , Glycidyl methacrylate -methyl methacrylate copolymer RL: MOA (Modifier or additive use) ; TEM (Technical or engineered material use); USES (Uses) (particles, lubricant-swelled ; polyamide compns. with good sliding property)				
RN	26141-88-8 HCAPLUS				
CN	2-Propenoic acid, 2-methyl-, methyl ester, polymer with oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)				

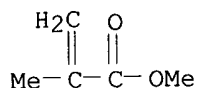
CM 1

CRN 106-91-2
CMF C7 H10 O3

CM 2

KATHLEEN FULLER EIC 1700 308-4290

CRN 80-62-6
CMF C5 H8 O2



L46 ANSWER 11 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1997:802176 HCAPLUS

DN 128:89920

TI Lubricative peroxide-crosslinked rubber compositions with low
friction

IN Hotta, Toru

PA Fujikura Rubber Works, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L021-00

ICS C08K003-04; C08L021-00; C08L083-04

CC 39-9 (Synthetic Elastomers and Natural Rubber)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09324078	A2	19971216	JP 1996-145545	19960607
AB	The compns. comprise peroxide-crosslinkable rubber 100, bifunctional silicone oils having functional terminals 5-30, and graphite 20-60 parts and are esp. suitable for sealings such as O-rings and packings. Zetpol 2020 (hydrogenated nitrile rubber) 100, X 22-164B (silicone oil contg. methacryl terminal groups) 10, G 50 (graphite) 30, Seast SO (carbon black) 30, stearic acid 1, ZnO 5, DOP 5, Perbutyl P 3, and Struktol WB 222 (processing aid) 2 parts were compounded, vulcanized at 170.degree., and cured at 150.degree. to give test pieces showing JIS A hardness 78, tensile strength 202 kg/cm ² , elongation 330%, and compression set after 70 h at 150.degree. 17 and exhibiting good lubricity.				
ST	peroxide crosslinked rubber silicone oil lubricant; bifunctional silicone oil lubricant rubber; hydrogenated nitrile rubber lubricant polysiloxane methacrylate ; graphite hydrogenated nitrile rubber silicone lubricant; sealing material peroxide crosslinked rubber				
IT	Lubricants (functional group-contg. silicones contg. graphite; lubricative peroxide-crosslinked rubber compns. contg. silicone oils and graphite for sealings)				
IT	Nitrile rubber, properties RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (hydrogenated, Zetpol 2020; lubricative peroxide-crosslinked rubber compns. contg. silicone oils and graphite for sealings)				
IT	Sealing compositions (lubricative peroxide-crosslinked rubber compns. contg. silicone oils and graphite for sealings)				
IT	Polysiloxanes, properties RL: MOA (Modifier or additive use) ; POF (Polymer in formulation); PRP (Properties); USES (Uses) (methacrylate -terminated, lubricants ; lubricative peroxide-crosslinked rubber compns. contg. silicone oils and graphite for sealings)				
IT	Vulcanizing agents				

KATHLEEN FULLER EIC 1700 308-4290

(peroxides; lubricative peroxide-crosslinked rubber compns. contg. silicone **oils** and graphite for sealings)

IT Polysiloxanes, properties
 RL: **MOA (Modifier or additive use)**; POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (terminated with functional groups, **lubricants**; lubricative peroxide-crosslinked rubber **compns.** contg. silicone **oils** and graphite for sealings)

IT Peroxides, uses
 RL: **MOA (Modifier or additive use)**; USES (Uses)
 (vulcanizing agents; lubricative peroxide-crosslinked rubber compns. contg. silicone **oils** and graphite for sealings)

IT 7782-42-5, Graphite, properties
 RL: **MOA (Modifier or additive use)**; PRP (Properties); USES (Uses)
 (G 50, **lubricant**; lubricative peroxide-crosslinked rubber **compns.** contg. silicone **oils** and graphite for sealings)

IT 31900-57-9D, Dimethylsilanediol homopolymer, **methacrylate**-terminated 58130-03-3, X 22-164B
 RL: **MOA (Modifier or additive use)**; POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (**lubricant**; lubricative peroxide-crosslinked rubber **compns.** contg. silicone **oils** and graphite for sealings)

IT 2212-81-9, Perbutyl P
 RL: **MOA (Modifier or additive use)**; USES (Uses)
 (lubricative peroxide-crosslinked rubber compns. contg. silicone **oils** and graphite for sealings)

IT 9003-18-3
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (nitrile rubber, hydrogenated, Zetpol 2020; lubricative peroxide-crosslinked rubber compns. contg. silicone **oils** and graphite for sealings)

IT 7782-42-5, Graphite, properties
 RL: **MOA (Modifier or additive use)**; PRP (Properties); USES (Uses)
 (G 50, **lubricant**; lubricative peroxide-crosslinked rubber **compns.** contg. silicone **oils** and graphite for sealings)

RN 7782-42-5 HCAPLUS
 CN Graphite (8CI, 9CI) (CA INDEX NAME)

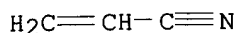
C

IT 9003-18-3
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (nitrile rubber, hydrogenated, Zetpol 2020; lubricative peroxide-crosslinked rubber compns. contg. silicone **oils** and graphite for sealings)

RN 9003-18-3 HCAPLUS
 CN 2-Propenenitrile, polymer with 1,3-butadiene (9CI) (CA INDEX NAME)

CM 1

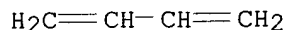
CRN 107-13-1
 CMF C3 H3 N



CM 2

CRN 106-99-0

CMF C4 H6



L46 ANSWER 12 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1997:718189 HCAPLUS

DN 127:347418

TI Polyacetal resin compositions with good **friction**/abrasion resistance, sliding parts, and noise-reduced gears therefrom

IN Takayama, Katsutomo; Shikado, Osamu; Ueda, Takanori

PA Polyplastics Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L059-00

ICS C08K005-01; C08K005-06; F16C033-20; C08L059-00; C08L023-26;
C08L083-04

CC 38-3 (Plastics Fabrication and Uses)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09286899	A2	19971104	JP 1996-102187	19960424
OS	MARPAT 127:347418				

AB Title **compns.** comprise (A) polyacetal resins 100, (B) modified olefin-based copolymers consisting of (i) olefins, (ii) (meth) **acrylic** acids and/or their esters, and (iii) unsatd. carboxylic acids, their anhydrides, and/or their derivs. 0.5-30, and (C) **lubricants** selected from silicones, .alpha.-olefin oligomers, paraffins, and/or substituted di-Ph ethers 0.5-10 parts. The component (ii) may be Me **acrylate**, Et **acrylate**, Pr **acrylate**, Bu **acrylate**, Me **methacrylate**, Et **methacrylate**, Pr **methacrylate**, and/or Bu **methacrylate**. Title sliding parts and gears obtained from the **compns.** are also claimed. Thus, 100 parts polyoxymethylene was blended with 5 parts maleated Et **acrylate**-ethylene copolymer and 2 parts ethylene-.alpha.-olefin oligomer, kneaded, pelletized, and injection-molded to give a rod showing abrasion amt. <0.1 mg in 20,000-times abrasion with a polyacetal resin.

ST wear resistant polyacetal resin molding gear; polyoxymethylene maleated olefin copolymer silicone blend; ethylene olefin oligomer lubricant polyacetal resin; polysiloxane **lubricant** polyacetal resin **compn**

IT Paraffin oils

Polysiloxanes, uses

RL: MOA (**Modifier or additive use**); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)(lubricants; polyacetal resin **compns.** with excellent **friction**/abrasion resistance for noise-reduced gears)

IT Abrasion-resistant materials

Gears

Lubricants

KATHLEEN FULLER EIC 1700 308-4290

Sliding parts
 (polyacetal resin **compns.** with excellent **friction**
 /abrasion resistance for noise-reduced gears)

IT Polyoxymethylenes, uses
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
 engineered material use); USES (Uses)
 (polyacetal resin **compns.** with excellent **friction**/abrasion
 resistance for noise-reduced gears)

IT .alpha.-Alkenes
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
 engineered material use); USES (Uses)
 (polymers with ethylenes, **lubricants**; polyacetal resin
compns. with excellent **friction**/abrasion resistance
 for noise-reduced gears)

IT 74-85-1D, Ethene, polymers with .alpha.-olefins 101-84-8D,
 C18-alkyl-substituted 9016-00-6, Polydimethylsiloxane 31900-57-9,
 Polydimethylsiloxane
 RL: **MOA (Modifier or additive use)**; PRP (Properties); TEM
 (Technical or engineered material use); USES (Uses)
 (**lubricants**; polyacetal resin **compns.** with
 excellent **friction**/abrasion resistance for noise-reduced
 gears)

IT 108-31-6D, 2,5-Furandione, reaction products with olefin copolymer
9010-77-9D, Acrylic acid-ethylene copolymer, maleated
9010-86-0D, Ethyl **acrylate**-ethylene copolymer, maleated
25101-13-7D, Ethylene-methyl **methacrylate** copolymer,
 maleated
 RL: **MOA (Modifier or additive use)**; PRP (Properties); TEM
 (Technical or engineered material use); USES (Uses)
 (polyacetal resin **compns.** with excellent **friction**/abrasion
 resistance for noise-reduced gears)

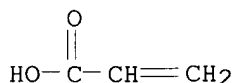
IT 50-00-0D, Formaldehyde, polymers
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
 engineered material use); USES (Uses)
 (polyacetal resin **compns.** with excellent **friction**/abrasion
 resistance for noise-reduced gears)

IT **9010-77-9D**, Acrylic acid-ethylene copolymer, maleated
9010-86-0D, Ethyl **acrylate**-ethylene copolymer, maleated
25101-13-7D, Ethylene-methyl **methacrylate** copolymer,
 maleated
 RL: **MOA (Modifier or additive use)**; PRP (Properties); TEM
 (Technical or engineered material use); USES (Uses)
 (polyacetal resin **compns.** with excellent **friction**/abrasion
 resistance for noise-reduced gears)

RN 9010-77-9 HCAPLUS
 CN 2-Propenoic acid, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7
 CMF C3 H4 O2



CM 2

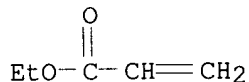
CRN 74-85-1
 CMF C2 H4



RN 9010-86-0 HCAPLUS
CN 2-Propenoic acid, ethyl ester, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 140-88-5
CMF C5 H8 O2



CM 2

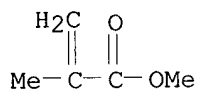
CRN 74-85-1
CMF C2 H4



RN 25101-13-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with ethene (9CI) (CA INDEX NAME)

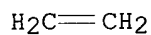
CM 1

CRN 80-62-6
CMF C5 H8 O2



CM 2

CRN 74-85-1
CMF C2 H4



L46 ANSWER 13 OF 52 HCAPLUS COPYRIGHT 2001 ACS
AN 1997:310124 HCAPLUS
DN 126:278775
TI Rubber compositions and their moldings with good ozone resistance, low friction coefficient, and good mold release
IN Ikeda, Takaharu
PA Nihon Valqua Kogyo Kk, Japan
SO Jpn. Kokai Tokkyo Koho, 11 PP.
CODEN: JKXXAF
DT Patent

KATHLEEN FULLER EIC 1700 308-4290

LA Japanese
 IC ICM C08L021-00
 ICS C08L021-00; C08J005-00; C08K005-02; C08L101-02; C08L083-04
 CC 39-9 (Synthetic Elastomers and Natural Rubber)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09067473	A2	19970311	JP 1995-226847	19950904
AB	Title compns. contain highly satd. rubbers with I value .ltoreq.15 g/100 g, 100, functional group-contg. lubricating oils 1-30, and functional group-contg. thermosetting resins 1-30 parts. Thus, hydrogenated NBR 100, 5:1 ZnO/stearic acid 6, 2-mercaptobenzimidazole 1.5, carbon black 30, triallyl isocyanurate 6, PhOH-HCHO resin fine particle (methylol group content 6-7%) 3, amino-terminated polysiloxane 15, and 1,3-bis(tert-butylperoxyisopropyl)benzene 3.2 parts were mixed and pressed to prep. a test sheet showing friction coeff. 0.4, O3 resistance, and good release from a mold.				
ST	rubber molding lubricant mold release; ozone resistance rubber molding compn; friction low rubber molding compn; thermoset additive molding rubber				
IT	Phenolic resins, uses RL: MOA (Modifier or additive use); USES (Uses) (additives; rubber molding compns. with good ozone resistance and mold release and low friction)				
IT	Polysiloxanes, uses RL: MOA (Modifier or additive use); USES (Uses) (amino-terminated, lubricants ; rubber molding compns . with good ozone resistance and mold release and low friction)				
IT	Polysiloxanes, uses RL: MOA (Modifier or additive use); USES (Uses) (carboxy-terminated, lubricants ; rubber molding compns. with good ozone resistance and mold release and low friction)				
IT	Synthetic rubber, properties RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (hexafluoropropene-tetrafluoroethylene-vinylidene fluoride; rubber molding compns. with good ozone resistance and mold release and low friction)				
IT	Nitrile rubber, properties RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (hydrogenated; rubber molding compns. with good ozone resistance and mold release and low friction)				
IT	Polysiloxanes, uses RL: MOA (Modifier or additive use); USES (Uses) (hydroxy-terminated, lubricants ; rubber molding compns. with good ozone resistance and mold release and low friction)				
IT	Polysiloxanes, uses RL: MOA (Modifier or additive use); USES (Uses) (methacrylate-terminated, lubricants ; rubber molding compns. with good ozone resistance and mold release and low friction)				
IT	Lubricating oil additives (rubber molding compns. with good ozone resistance and mold release and low friction)				
IT	Thermosetting plastics RL: MOA (Modifier or additive use); USES (Uses) (rubber molding compns. with good ozone resistance and mold release and low friction)				
IT	EPDM rubber RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or				

KATHLEEN FULLER EIC 1700 308-4290

engineered material use); USES (Uses)

(rubber molding compns. with good ozone resistance and mold release and low friction)

IT Polysiloxanes, uses

RL: MOA (Modifier or additive use); USES (Uses)

(vinyl group-terminated, lubricants; rubber molding compns. with good ozone resistance and mold release and low friction)

IT 9003-35-4, Phenol-formaldehyde copolymer

RL: MOA (Modifier or additive use); USES (Uses)

(additives; rubber molding compns. with good ozone resistance and mold release and low friction)

IT 9003-18-3

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(nitrile rubber, hydrogenated; rubber molding compns. with good ozone resistance and mold release and low friction)

IT 25190-89-0, Hexafluoropropylene-tetrafluoroethylene-vinylidene fluoride copolymer

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(rubber; rubber molding compns. with good ozone resistance and mold release and low friction)

IT 9003-18-3

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(nitrile rubber, hydrogenated; rubber molding compns. with good ozone resistance and mold release and low friction)

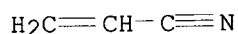
RN 9003-18-3 HCAPLUS

CN 2-Propenenitrile, polymer with 1,3-butadiene (9CI) (CA INDEX NAME)

CM 1

CRN 107-13-1

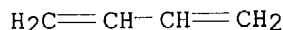
CMF C3 H3 N



CM 2

CRN 106-99-0

CMF C4 H6



L46 ANSWER 14 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1997:139667 HCAPLUS

DN 126:145009

TI Self-lubricating styrene polymer compositions

IN Oda, Takeshi; Okaniwa, Shizuo

PA Denki Kagaku Kogyo Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L025-02

ICS C08K005-49; C08K005-524; C08L025-02; C08L083-04

CC 37-6 (Plastics Manufacture and Processing)

KATHLEEN FULLER EIC 1700 308-4290

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08325426	A2	19961210	JP 1995-138288	19950605
OS	MARPAT 126:145009				
AB	The title compns. giving injection moldings with no black streak comprise styrene polymers 100, silicone oils 0.5-10, and P compds. P(O)HXY (X, Y = R, OR; R = alkyl, arom. groups; X-P-Y may form cyclic structures) 0.05-1 parts. Thus, Denka Styrol HI-RQ (high-impact polystyrene) 100, SH 200 (silicone oil) 3.0, and HCA (heat stabilizer) 0.2 part were melt-kneaded, pelletized, and injection-molded to give test pieces with no black streak, tensile strength 230 kg/cm ² , Izod impact strength 7.4 kg-cm/cm, melt flow index 6.6 g/10 min, heat distortion temp. 79.degree. (ASTM D, resp.), and dynamic friction coeff. 0.027.				
ST	polystyrene silicone oil lubricant; phosphorus compd polystyrene molding; heat stabilizer polystyrene molding				
IT	Polysiloxanes RL: MOA (Modifier or additive use) ; USES (Uses) (lubricants ; self-lubricating styrene polymer compns contg. silicone oil and phosphorus compds.)				
IT	Heat stabilizers (phosphorus compds.; self-lubricating styrene polymer compns. contg. silicone oil and phosphorus compds.)				
IT	Lubricants (silicone oils ; self-lubricating styrene polymer compns . contg. silicone oil and phosphorus compds.)				
IT	42557-10-8, SH 200 RL: MOA (Modifier or additive use) ; USES (Uses) (SH 200; self-lubricating styrene polymer compns. contg. silicone oil and phosphorus compds.)				
IT	100-42-5D, Styrene, polymers RL: POF (Polymer in formulation); PRP (Properties); USES (Uses) (impact-resistant; self-lubricating styrene polymer compns. contg. silicone oil and phosphorus compds.)				
IT	4712-55-4, Diphenyl phosphite 31900-57-9D, Dimethylsilanediol homopolymer, trimethylsilyl-terminated 35948-25-5, HCA (heat stabilizer) RL: MOA (Modifier or additive use) ; USES (Uses) (self-lubricating styrene polymer compns. contg. silicone oil and phosphorus compds.)				
IT	9003-53-6, Denka Styrol GP 1 9003-56-9, Denka ABS-GR 1000 148498-96-8, HI-RQ RL: POF (Polymer in formulation); PRP (Properties); USES (Uses) (self-lubricating styrene polymer compns. contg. silicone oil and phosphorus compds.)				
IT	9003-56-9, Denka ABS-GR 1000 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses) (self-lubricating styrene polymer compns. contg. silicone oil and phosphorus compds.)				
RN	9003-56-9 HCAPLUS				
CN	2-Propenenitrile, polymer with 1,3-butadiene and ethenylbenzene (9CI) (CA INDEX NAME)				

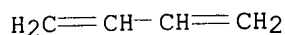
CM 1

CRN 107-13-1

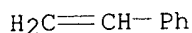
CMF C3 H3 N



CM 2

CRN 106-99-0
CMF C4 H6

CM 3

CRN 100-42-5
CMF C8 H8

L46 ANSWER 15 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1997:131889 HCAPLUS

DN 126:132559

TI Rubber compositions with low abrasion property and improved lubricity

IN Kurose, Isao; Aoi, Hiroyasu; Takahashi, Tadashi

PA Uchama Kogyo Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L021-00

ICS C08K007-22; C08L021-00; C08L083-04; C08L027-12

CC 39-9 (Synthetic Elastomers and Natural Rubber)

Section cross-reference(s): 42

FAN.CNT 1

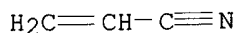
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08319379	A2	19961203	JP 1995-59735	19950222
AB	The compns. , useful for sealing materials, are prepd. by kneading rubbers and plastic grained particles with connected cell structure, which are impregnated with lubricants , and vulcanization molding. Thus, 100 parts a nitrile rubber and 5 parts nylon particles impregnated with 5 parts a silicone oil (1000CS) were kneaded, vulcanized, and molded to give a test piece with coeff. of kinetic friction 1.0 .mu..				
ST	rubber lubricant impregnation nylon particle; abrasion resistance rubber lubricant silicone oil ; fluorine oil lubricant nitrile rubber; acrylic rubber lubricant connected cell plastics; sealant lubricant impregnated plastic particle rubber				
IT	Polysiloxanes, uses RL: MOA (Modifier or additive use) ; TEM (Technical or engineered material use); USES (Uses) (di-Me, mono(hydroxyalkyl) group-terminated, lubricants , X 22-170B; rubber compns. contg. lubricants and plastic particles with low abrasion property)				
IT	Polyoxyalkylenes, uses RL: MOA (Modifier or additive use) ; TEM (Technical or engineered material use); USES (Uses) (fluorine-contg., oils , lubricants ; rubber compns. contg. lubricants and plastic particles with low abrasion property)				
IT	Polysiloxanes, uses RL: MOA (Modifier or additive use) ; TEM (Technical or engineered material use); USES (Uses)				

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- (lubricants, 1000CS, 10CS; rubber **compns.** contg. lubricants and plastic particles with low abrasion property)
- IT Polyamides, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(particles; rubber **compns.** contg. lubricants and plastic particles with low abrasion property)
- IT Fluoropolymers, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(polyoxyalkylene-, oils, lubricants; rubber **compns.** contg. lubricants and plastic particles with low abrasion property)
- IT Lubricants
Sealing compositions
(rubber **compns.** contg. lubricants and plastic particles with low abrasion property)
- IT Acrylic rubber
Fluoro rubber
Nitrile rubber, properties
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(rubber **compns.** contg. lubricants and plastic particles with low abrasion property)
- IT 9016-00-6D, Dimethylsilanediol homopolymer, sru, mono(hydroxyalkyl)-terminated 31900-57-9D, Dimethylsilanediol homopolymer, mono(hydroxyalkyl)-terminated
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(lubricants; rubber **compns.** contg. lubricants and plastic particles with low abrasion property)
- IT 9003-18-3
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(nitrile rubber, rubber **compns.** contg. lubricants and plastic particles with low abrasion property)
- IT 105060-59-1, Demnum S 100
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(oils, lubricants; rubber **compns.** contg. lubricants and plastic particles with low abrasion property)
- IT 9003-18-3
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(nitrile rubber, rubber **compns.** contg. lubricants and plastic particles with low abrasion property)
- RN 9003-18-3 HCAPLUS
CN 2-Propenenitrile, polymer with 1,3-butadiene (9CI) (CA INDEX NAME)

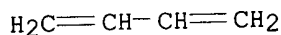
CM 1

CRN 107-13-1
CMF C3 H3 N



CM 2

CRN 106-99-0
CMF C4 H6



L46 ANSWER 16 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1997:116524 HCAPLUS

DN 126:119876

TI **Lubricant compositions** containing
superabsorbent polymer *

IN Levy, Richard

PA Lee County Mosquito Control District, USA

SO PCT Int. Appl., 64 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C10M111-04

ICS C10M169-04; C10M173-00

ICI C10N030-06, C10N040-20

CC 51-8 (Fossil **Fuels**, Derivatives, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9640849	A1	19961219	WO 1996-US10246	19960606
	W:				AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG
	RW:				KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN
	CA 2223286	AA	19961219	CA 1996-2223286	19960606
	AU 9662780	A1	19961230	AU 1996-62780	19960606
	AU 691758	B2	19980521		
	EP 851908	A1	19980708	EP 1996-921587	19960606
	R:				AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
	JP 11507678	T2	19990706	JP 1996-502259	19960606
PRAI	US 1995-487436		19950607		
	US 1996-583587		19960105		
	WO 1996-US10246		19960606		
AB	A process is disclosed for manufg. a lubricant compn. comprising combining a superabsorbent polymer with a material for decreasing friction between moving surfaces . The superabsorbent polymer absorbs from .apprx.25 to greater than 100 times its wt. in water and may comprise a polymer of acrylic acid , an acrylic ester , acrylonitrile or acrylamide , including co-polymers thereof or starch graft co-polymers thereof or mixts. thereof. A product produced by the process includes the material for decreasing friction comprising a petroleum lubricant contg. an additive, water contg. an additive, synthetic lubricant , grease , solid lubricant or metal working lubricant, contg. an additive, water contg. an additive, synthetic lubricant , grease , solid lubricant or metal working lubricant, wherein the synthetic lubricant , grease , solid lubricant or metal working lubricant optionally contain an additive. A process comprising controlling the delivery of a lubricant to at least one of two moving surfaces to decrease friction between said moving surfaces , is also disclosed. This process includes applying the lubricant compn. to at least one of the surfaces. The lubricant compn. in this instance comprises a superabsorbent polymer combined with a material for decreasing friction between moving surfaces , wherein the material for decreasing				

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applicant

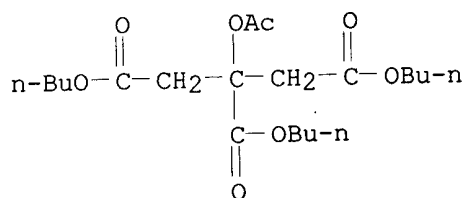
friction comprises a petroleum lubricant, water, synthetic lubricant, grease, solid lubricant or metal working lubricant, and optionally an additive.

- ST lubricant superabsorbent polymer
- IT Lubricating oils
 - RL: MOA (Modifier or additive use); USES (Uses)
 - (Royco 481 Oil and Marvel Mystery Oil;
 - lubricant compns. contg. superabsorbent polymer)
- IT Lubricants
 - Lubricating greases
 - (lubricant compns. contg. superabsorbent polymer)
- IT Acrylic polymers, uses
 - Asbestos
 - Mica-group minerals, uses
 - RL: MOA (Modifier or additive use); USES (Uses)
 - (lubricant compns. contg. superabsorbent polymer)
- IT Metalworking
 - (lubricants; lubricant compns. contg. superabsorbent polymer)
- IT Lubricants
 - (metalworking; lubricant compns. contg. superabsorbent polymer)
- IT 77-90-7 598-63-0, Lead carbonate 1303-96-4, Borax 1314-13-2, Zinc oxide, uses 1317-33-5, Molybdenum disulfide, uses 1319-46-6, White lead 1327-33-9, Antimony oxide 7429-90-5, Aluminum, uses 7439-92-1, Lead, uses 7439-97-6, Mercury, uses 7440-22-4, Silver, uses 7440-28-0, Thallium, uses 7440-29-1, Thorium, uses 7440-31-5, Tin, uses 7440-44-0, Carbon, uses 7440-50-8, Copper, uses 7440-55-3, Gallium, uses 7440-57-5, Gold, uses 7440-74-6, Indium, uses 7646-79-9, Cobalt chloride, uses 7779-90-0, Zinc phosphate 7782-42-5, Graphite, uses 7790-80-9, Cadmium iodide 9003-05-8, Polyacrylamide 10043-11-5, Boron nitride, uses 10108-64-2, Cadmium chloride 10124-54-6, Manganese phosphate 10294-26-5, Silver sulfate 10402-24-1, Iron phosphate 12138-09-9, Tungsten disulfide 12597-70-5, Bronze 12597-71-6, Brass, uses 12684-19-4, Lead iodide 12704-93-7, Aquasorb 14807-96-6, Talc, uses 25014-41-9, Polyacrylonitrile 52292-17-8, Arosurf 66E2 57175-99-2, Babbitt 64176-75-6, Niobium selenide 124448-23-3, Alcosorb AB3F 127289-34-3, Aquastore F 150523-07-2, SuperSorb 159074-52-9, Sanwet Im-1500F 186270-48-4, Water-Lock A 140 186270-50-8, Aridell 11250 186270-52-0, Favor CA 100
 - RL: MOA (Modifier or additive use); USES (Uses)
 - (lubricant compns. contg. superabsorbent polymer)
- IT 77-90-7 598-63-0, Lead carbonate 1303-96-4, Borax 1314-13-2, Zinc oxide, uses 1317-33-5, Molybdenum disulfide, uses 1319-46-6, White lead 1327-33-9, Antimony oxide 7429-90-5, Aluminum, uses 7439-92-1, Lead, uses 7439-97-6, Mercury, uses 7440-22-4, Silver, uses 7440-28-0, Thallium, uses 7440-29-1, Thorium, uses 7440-31-5, Tin, uses 7440-44-0, Carbon, uses 7440-50-8, Copper, uses 7440-55-3, Gallium, uses 7440-57-5, Gold, uses 7440-74-6, Indium, uses 7646-79-9, Cobalt chloride, uses 7779-90-0, Zinc phosphate 7782-42-5, Graphite, uses

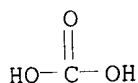
KATHLEEN FULLER EIC 1700 308-4290

7790-80-9, Cadmium iodide 9003-05-8,
 Polyacrylamide 10043-11-5, Boron nitride, uses
 10108-64-2, Cadmium chloride 10124-54-6, Manganese
 phosphate 10294-26-5, Silver sulfate 10402-24-1, Iron
 phosphate 12138-09-9, Tungsten disulfide 12597-70-5,
 Bronze 12597-71-6, Brass, uses 12684-19-4, Lead iodide
 12704-93-7, Aquasorb 14807-96-6, Talc, uses
 25014-41-9, Polyacrylonitrile 52292-17-8,
 Arosurf 66E2 57175-99-2, Babbitt 64176-75-6, Niobium
 selenide 124448-23-3, Alcosorb AB3F 127289-34-3,
 Aquastore F 150523-07-2, SuperSorb 159074-52-9, Sanwet
 Im-1500F 186270-48-4, Water-Lock A 140
 186270-50-8, Aridell 11250 186270-52-0, Favor CA 100
 RL: MOA (Modifier or additive use); USES (Uses)
 (lubricant compns. contg. superabsorbent
 polymer)

RN 77-90-7 HCAPLUS
 CN 1,2,3-Propanetricarboxylic acid, 2-(acetyloxy)-, tributyl ester (9CI) (CA
 INDEX NAME)



RN 598-63-0 HCAPLUS
 CN Carbonic acid, lead(2+) salt (1:1) (8CI, 9CI) (CA INDEX NAME)

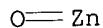


● Pb(II)

RN 1303-96-4 HCAPLUS
 CN Borax (B₄Na₂O₇·10H₂O) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 1314-13-2 HCAPLUS
 CN Zinc oxide (ZnO) (9CI) (CA INDEX NAME)



RN 1317-33-5 HCAPLUS
 CN Molybdenum sulfide (MoS₂) (8CI, 9CI) (CA INDEX NAME)



RN 1319-46-6 HCAPLUS
 CN Lead, bis[carbonato(2-)]dihydroxytri- (9CI) (CA INDEX NAME)

KATHLEEN FULLER EIC 1700 308-4290

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 1327-33-9 HCAPLUS
CN Antimony oxide (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 7429-90-5 HCAPLUS
CN Aluminum (8CI, 9CI) (CA INDEX NAME)

Al

RN 7439-92-1 HCAPLUS
CN Lead (8CI, 9CI) (CA INDEX NAME)

Pb

RN 7439-97-6 HCAPLUS
CN Mercury (8CI, 9CI) (CA INDEX NAME)

Hg

RN 7440-22-4 HCAPLUS
CN Silver (8CI, 9CI) (CA INDEX NAME)

Ag

RN 7440-28-0 HCAPLUS
CN Thallium (8CI, 9CI) (CA INDEX NAME)

Tl

RN 7440-29-1 HCAPLUS
CN Thorium (8CI, 9CI) (CA INDEX NAME)

Th

RN 7440-31-5 HCAPLUS
CN Tin (8CI, 9CI) (CA INDEX NAME)

Sn

RN 7440-44-0 HCAPLUS
CN Carbon (7CI, 8CI, 9CI) (CA INDEX NAME)

C

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-55-3 HCAPLUS
CN Gallium (8CI, 9CI) (CA INDEX NAME)

Ga

RN 7440-57-5 HCAPLUS
CN Gold (8CI, 9CI) (CA INDEX NAME)

Au

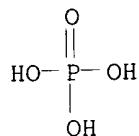
RN 7440-74-6 HCAPLUS
CN Indium (8CI, 9CI) (CA INDEX NAME)

In

RN 7646-79-9 HCAPLUS
CN Cobalt chloride (CoCl₂) (8CI, 9CI) (CA INDEX NAME)

Cl-Co-Cl

RN 7779-90-0 HCAPLUS
CN Phosphoric acid, zinc salt (2:3) (8CI, 9CI) (CA INDEX NAME)



● 3/2 Zn

RN 7782-42-5 HCAPLUS
CN Graphite (8CI, 9CI) (CA INDEX NAME)

C

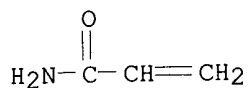
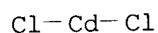
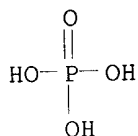
RN 7790-80-9 HCAPLUS
CN Cadmium iodide (CdI₂) (6CI, 8CI, 9CI) (CA INDEX NAME)

I-Cd-I

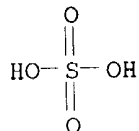
RN 9003-05-8 HCAPLUS
CN 2-Propenamide, homopolymer (9CI) (CA INDEX NAME)

KATHLEEN FULLER EIC 1700 308-4290

CM 1

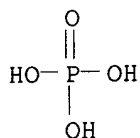
CRN 79-06-1
CMF C3 H5 N ORN 10043-11-5 HCAPLUS
CN Boron nitride (BN) (8CI, 9CI) (CA INDEX NAME)RN 10108-64-2 HCAPLUS
CN Cadmium chloride (CdCl₂) (7CI, 8CI, 9CI) (CA INDEX NAME)RN 10124-54-6 HCAPLUS
CN Phosphoric acid, manganese salt (8CI, 9CI) (CA INDEX NAME)

● x Mn(x)

RN 10294-26-5 HCAPLUS
CN Sulfuric acid, disilver(1+) salt (8CI, 9CI) (CA INDEX NAME)

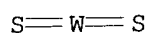
● 2 Ag(I)

RN 10402-24-1 HCAPLUS
CN Phosphoric acid, iron salt (8CI, 9CI) (CA INDEX NAME)



● x Fe(x)

RN 12138-09-9 HCAPLUS
CN Tungsten sulfide (WS2) (8CI, 9CI) (CA INDEX NAME)



RN 12597-70-5 HCAPLUS
CN Bronze (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 12597-71-6 HCAPLUS
CN Brass (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

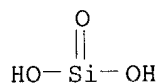
RN 12684-19-4 HCAPLUS
CN Lead iodide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
I	x	14362-44-8
Pb	x	7439-92-1

RN 12704-93-7 HCAPLUS
CN Aquasorb (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 14807-96-6 HCAPLUS
CN Talc (Mg3H2(SiO3)4) (9CI) (CA INDEX NAME)



● 3/4 Mg

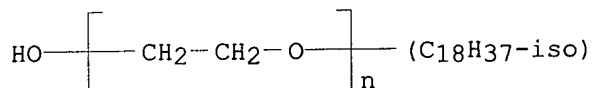
RN 25014-41-9 HCAPLUS
CN 2-Propenenitrile, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 107-13-1
CMF C3 H3 N



RN 52292-17-8 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), .alpha.-isooctadecyl-.omega.-hydroxy- (9CI) (CA INDEX NAME)



RN 57175-99-2 HCAPLUS
 CN Lead alloy, base, (Babbitt) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 64176-75-6 HCAPLUS
 CN Niobium selenide (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 124448-23-3 HCAPLUS
 CN Alcosorb AB 3F (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 127289-34-3 HCAPLUS
 CN Aquastore F (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 150523-07-2 HCAPLUS
 CN SuperSorb (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 159074-52-9 HCAPLUS
 CN Sanwet IM 1500F (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 186270-48-4 HCAPLUS
 CN Water-Lock A 140 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 186270-50-8 HCAPLUS
 CN Aridell 11250 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 186270-52-0 HCAPLUS
 CN Favor CA 100 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L46 ANSWER 17 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1996:693813 HCAPLUS

DN 125:302907

TI Block copolymer compositions with good lubricity and blocking resistance at high temperature and heat-shrinkable films therefrom

IN Totani, Hideki; Muraoka, Masaaki; Umedo, Masashi

PA Denki Kagaku Kogyo Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 15

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L053-02

ICS B29C055-02; C08J005-18; C08K003-00; C08L025-04; C08L091-06

ICI B29K025-00, B29L007-00

CC 38-3 (Plastics Fabrication and Uses)

FAN.CNT 1

KATHLEEN FULLER EIC 1700 308-4290

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08225712	A2	19960903	JP 1995-288959	19951107
PRAI	JP 1994-275194		19941109		
AB	<p>Comps. with good film-forming ability, useful for labels, cap seals, and packaging films, contain (a) 20-100 parts 50:50-90:10 vinyl arom. hydrocarbon-conjugated diene block copolymers, (b) 0-80 parts .gtoreq.1 polymer selected from vinyl arom. hydrocarbon polymers, vinyl arom. hydrocarbon-(meth)acrylic acid (ester) copolymers (vinyl arom. hydrocarbon content .gtoreq.95%), and rubber-modified styrene polymers, (c) 2.1-50 parts (vs. 100 parts a + b) polyethylene or amide-based waxes. Thus, 3.74 parts (vs. 100 parts a + b) polyethylene or amide-based waxes. Thus, 3.74 kg styrene was polymd. in cyclohexane/THF in the presence of BuLi and further polymd. with 14.5 kg styrene and 3.74 kg butadiene to obtain a block copolymer (no.-av. mol. wt. 166,000, styrene block ratio 78%), 100 parts of which was mixed with 5 parts SiO₂ and 3 parts N,N'-ethylenebis(stearic acid amide), pelletized, extruded, and stretched in the transverse direction to give a film showing static friction coeff. [tanX; X = friction angle (.degree.)] 0.26 and good blocking resistance after immersion in H₂O at 80.degree..</p>				
ST	antiblocking film styrene butadiene block polymer; heat shrinkable film butadiene styrene polymer				
IT	<p>Lubricants (amides and polyethylene waxes; arom. vinyl compd.-conjugated diene block copolymer comps. for antiblocking heat-shrinkable films with good lubricity)</p>				
IT	<p>Plastics, film RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (arom. vinyl compd.-conjugated diene block copolymer comps. for antiblocking heat-shrinkable films with good lubricity)</p>				
IT	<p>Glass, oxide RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (beads, filler; arom. vinyl compd.-conjugated diene block copolymer comps. for antiblocking heat-shrinkable films with good lubricity)</p>				
IT	<p>Heat-shrinkable materials (films, arom. vinyl compd.-conjugated diene block copolymer comps. for antiblocking heat-shrinkable films with good lubricity)</p>				
IT	<p>25034-86-0P, Methyl methacrylate-styrene copolymer 25767-47-9P, n-Butyl acrylate-styrene copolymer 106107-54-4P, Butadiene-styrene block copolymer RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (arom. vinyl compd.-conjugated diene block copolymer comps. for antiblocking heat-shrinkable films with good lubricity)</p>				
IT	<p>9003-53-6, GP 1 106974-54-3, HIE 4 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (arom. vinyl compd.-conjugated diene block copolymer comps. for antiblocking heat-shrinkable films with good lubricity)</p>				
IT	<p>7631-86-9, Silica, uses RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (filler; arom. vinyl compd.-conjugated diene block copolymer comps. for antiblocking heat-shrinkable films with good lubricity)</p>				
IT	<p>110-30-5, N,N'-Ethylenebisstearic amide RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (lubricant; arom. vinyl compd.-conjugated diene block copolymer comps. for antiblocking heat-shrinkable films with good lubricity)</p>				
IT	<p>9002-88-4, Polyethylene</p>				

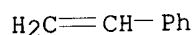
RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (wax, lubricant; arom. vinyl compd.-conjugated diene block copolymer compns. for antiblocking heat-shrinkable films with good lubricity)

IT 25034-86-0P, Methyl methacrylate-styrene copolymer
 25767-47-9P, n-Butyl acrylate-styrene copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (arom. vinyl compd.-conjugated diene block copolymer compns. for antiblocking heat-shrinkable films with good lubricity)

RN 25034-86-0 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

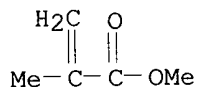
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CRN 100-42-5
 CMF C8 H8



CM 2

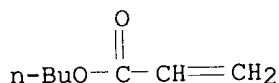
CRN 80-62-6
 CMF C5 H8 O2



RN 25767-47-9 HCAPLUS
 CN 2-Propenoic acid, butyl ester, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

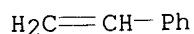
CM 1

CRN 141-32-2
 CMF C7 H12 O2



CM 2

CRN 100-42-5
 CMF C8 H8



AN 1996:634932 HCAPLUS
 DN 125:249875
 TI Fluoro rubber and fluoro thermoplastic resin-based composition for V ring
 IN Fukuzawa, Satoru; Oki, Yoshiro
 PA Ntn Toyo Bearing Co Ltd, Japan
 SO Jpn. Kokai Tokkyo Koho, 14 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 ICM C10M107-38
 ICS C08K003-00; C08L027-12; C09K003-10; F16J015-16
 ICI C10N020-00, C10N020-04, C10N020-06, C10N040-34, C10N050-08
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 39

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08193197	A2	19960730	JP 1995-206104	19950811
PRAI	JP 1994-190651		19940812		

AB Non-adhesive, low **friction** and abrasion-resistant V ring was
 prepd. from lubricative rubber compn. consisting of fluoro rubber,
 thermoplastic fluoro resin, and low mol. wt. (< 5 .times. 10⁴) fluoro
 copolymer. Thus a **compn.** was prepd. by blending vinylidene
 fluoride-fluoropropylene copolymer-based fluoro rubber (Tecnoflon FOR 420)
 70 wt% with tetrafluoroethylene-ethylene copolymer (Aflon COP) 30 wt%, MT
 carbon 5 wt%, sodium stearate 1 wt%, MgO 3 wt% and Ca(OH) 6 wt% at temp.
 60.degree., then adding a low mol. wt. fluoro copolymer (**Lubricant**
 L 169) 30 wt% into the mixt. and blending it at 70.degree.-90.degree..
 The compn. sheet prepd. was vulcanized at 170.degree. under press
pressure 7 kgf/cm² for 10 min and second vulcanized at
 230.degree., under free **pressure** for 16 h. The compn. sheet
 showed low **friction** and abrasion-resistant properties, and good
 non-adhesive and mech. characteristics.

ST fluoro rubber thermoplastic compn V ring; tetrafluoroethylene ethylene
 copolymer fluoro rubber compn

IT Rubber, nitrile, uses
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in
 formulation); PRP (Properties); TEM (Technical or engineered material
 use); PROC (Process); USES (Uses)
 (JSR 200S, JSR 240S; prepn. of fluoro rubber and fluoro thermoplastic
 resin-based compn. for V ring)

IT Carbon black, uses
 RL: **MOA (Modifier or additive use)**; USES (Uses)
 (compn. contg.; prepn. of fluoro rubber and fluoro thermoplastic
 resin-based compn. for V ring)

IT Vulcanization
 (in prepn. of fluoro rubber and fluoro thermoplastic resin-based compn.
 for V ring)

IT Phenolic resins, uses
 RL: **MOA (Modifier or additive use)**; USES (Uses)
 (prepn. of fluoro rubber and fluoro thermoplastic resin-based compn.
 for V ring)

IT Fluoropolymers
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in
 formulation); PRP (Properties); TEM (Technical or engineered material
 use); PROC (Process); USES (Uses)
 (prepn. of fluoro rubber and fluoro thermoplastic resin-based compn.
 for V ring)

IT Rubber, synthetic
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in
 formulation); PRP (Properties); TEM (Technical or engineered material
 use); PROC (Process); USES (Uses)
 (hexafluoropropene-vinylidene fluoride, Tecnoflon FOR 420; prepn. of
 fluoro rubber and fluoro thermoplastic resin-based compn. for V ring)

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IT 822-16-2, Sodium stearate 1305-62-0, Calcium hydroxide, uses
 1309-48-4, Magnesium oxide, uses 7440-44-0, Carbon, uses
 114237-33-1, Bellpearl H 300
 RL: MOA (Modifier or additive use); USES (Uses)
 (compn. contg.; prepn. of fluoro rubber and fluoro thermoplastic
 resin-based compn. for V ring)

IT 9002-84-0, Polytetrafluoroethylene 25038-71-5, Aflon COP
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in
 formulation); PRP (Properties); TEM (Technical or engineered material
 use); PROC (Process); USES (Uses)
 (prepn. of fluoro rubber and fluoro thermoplastic resin-based compn.
 for V ring)

IT 9003-18-3
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in
 formulation); PRP (Properties); TEM (Technical or engineered material
 use); PROC (Process); USES (Uses)
 (rubber, JSR 200S, JSR 240S; prepn. of fluoro rubber and fluoro
 thermoplastic resin-based compn. for V ring)

IT 9011-17-0, Hexafluoropropene-vinylidene fluoride copolymer
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in
 formulation); PRP (Properties); TEM (Technical or engineered material
 use); PROC (Process); USES (Uses)
 (rubber; prepn. of fluoro rubber and fluoro thermoplastic resin-based
 compn. for V ring)

IT 7782-42-5, Graphite, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (spherical, compn. contg.; prepn. of fluoro rubber and fluoro
 thermoplastic resin-based compn. for V ring)

IT 7440-44-0, Carbon, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (compn. contg.; prepn. of fluoro rubber and fluoro thermoplastic
 resin-based compn. for V ring)

RN 7440-44-0 HCAPLUS
 CN Carbon (7CI, 8CI, 9CI) (CA INDEX NAME)

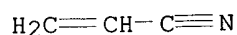
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IT 9003-18-3
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in
 formulation); PRP (Properties); TEM (Technical or engineered material
 use); PROC (Process); USES (Uses)
 (rubber, JSR 200S, JSR 240S; prepn. of fluoro rubber and fluoro
 thermoplastic resin-based compn. for V ring)

RN 9003-18-3 HCAPLUS
 CN 2-Propenenitrile, polymer with 1,3-butadiene (9CI) (CA INDEX NAME)

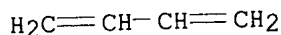
CM 1

CRN 107-13-1
 CMF C3 H3 N



CM 2

CRN 106-99-0
 CMF C4 H6



IT 7782-42-5, Graphite, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (spherical, compn. contg.; prepn. of fluoro rubber and fluoro
 thermoplastic resin-based compn. for V ring)
 RN 7782-42-5 HCAPLUS
 CN Graphite (8CI, 9CI) (CA INDEX NAME)

C

L46 ANSWER 19 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1995:910648 HCAPLUS

DN 124:57924

TI Thermoplastic resin compositions with excellent mechanical properties,
 moldability, and sliding properties

IN Sugiura, Motoyuki; Ito, Tetsuya; Oomura, Hiroshi

PA Nippon Oils & Fats Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L101-00

ICS C08L053-00; C08L083-10

CC 37-6 (Plastics Manufacture and Processing)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07216240	A2	19950815	JP 1994-13819	19940207
AB	Title compns. contain (A) siloxane copolymers obtained by copolymerg. 5-85% $\text{CH}_2:\text{CR1CO}_2(\text{CH}_2)3\text{SiR22}(\text{OSiR32})\text{nOSiR43}$ (I) and/or $\text{CH}_2:\text{CR1CO}_2(\text{CH}_2)3\text{SiR22}(\text{OSiR32})\text{nOSiR22}(\text{CH}_2)3\text{OCOC}(\text{R1})\text{:CH}_2$ [R1 = H, Me; R2 = Me, Et, Ph, (OSiR52)mOSiR63; R3 = H, Ph, CpH2p+1; R4 = Me, Et, Ph; n .gtoreq. 1; p = 1-10; R5 = H, Ph, CpH2p+1; R6 = Me, Et, Ph; m .gtoreq. 1] and 15-95% .gtoreq.1 vinyl monomer or (B) copolymers composed of the siloxane copolymer segments and other vinyl polymer segments. Thus, styrene 1050, acrylonitrile 450, and I (R1-4 = Me; no.-av. mol. wt. 5000) 500 g were treated at 70.degree. for 5 h in H2O contg. poly(vinyl alc.) in the presence of Peroyl 355 and Nofmer MSD to give a copolymer (II). A mixt. of 99% 1013B and 1% II was pelletized and injection-molded to give test pieces showing Izod impact strength 7 kg-cm/cm, bending strength 1050 kg/cm2, heat distortion temp. 74.degree., kinetic friction coeff. (to steel) 0.26, spiral flow 730 mm at 260.degree., and good appearance.				
ST	acrylic siloxane lubricant thermoplastic resin; sliding property acrylic siloxane blend thermoplastic; polyamide acrylic siloxane lubricant				
IT	Antifriction materials Impact-resistant materials Lubricants (thermoplastic resin compns. contg. acrylic siloxane lubricants)				
IT	Polycarbonates, properties Polyesters, properties Polyoxymethylenes, properties Polyoxyphenylenes Polythiophenylenes RL: POF (Polymer in formulation); PRP (Properties); USES (Uses) (thermoplastic resin compns. contg. acrylic siloxane lubricants)				

KATHLEEN FULLER EIC 1700 308-4290

IT Siloxanes and Silicones, preparation
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use)
 ; PREP (Preparation); USES (Uses)
 (acrylic, thermoplastic resin compns. contg.
 acrylic siloxane lubricants)

IT 172083-77-1P 172083-78-2P 172274-74-7P
 172274-75-8P
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use)
 ; PREP (Preparation); USES (Uses)
 (thermoplastic resin compns. contg. acrylic
 siloxane lubricants)

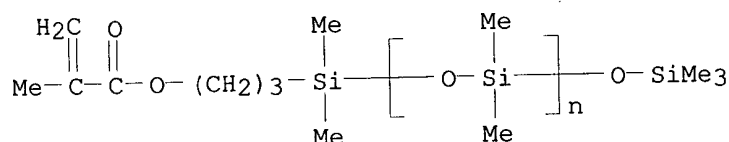
IT 9003-56-9, Stylac ABS 283 24936-68-3, Panlite L 1250, properties
 24968-12-5, 1401X06 25037-45-0, Bisphenol A-carbonic acid copolymer
 25038-54-4, 1013B, properties 25212-74-2, Fortron KPS 26062-94-2,
 1,4-Butanediol-terephthalic acid copolymer 112002-29-6, Noryl 534J801
 166799-47-9, Tenac 4510
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (thermoplastic resin compns. contg. acrylic
 siloxane lubricants)

IT 172083-77-1P 172083-78-2P 172274-74-7P
 172274-75-8P
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use)
 ; PREP (Preparation); USES (Uses)
 (thermoplastic resin compns. contg. acrylic
 siloxane lubricants)

RN 172083-77-1 HCAPLUS
 CN 2-Propenenitrile, polymer with .alpha.-[dimethyl[3-[(2-methyl-1-oxo-2-
 propenyl)oxy]propyl)silyl]-.omega.-[(trimethylsilyl)oxy]poly[oxy(dimethyls
 iylene)] and ethenylbenzene, graft (9CI) (CA INDEX NAME)

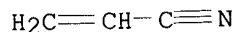
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CRN 123109-42-2
 CMF (C2 H6 O Si)n C12 H26 O3 Si2
 CCI PMS



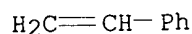
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CRN 107-13-1
 CMF C3 H3 N



CM 3

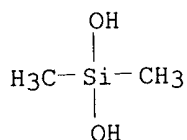
CRN 100-42-5
 CMF C8 H8



RN 172083-78-2 HCAPLUS
 CN 2-Propenenitrile, polymer with dimethylsilanediol and ethenylbenzene,
 graft (9CI) (CA INDEX NAME)

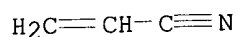
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CRN 1066-42-8
 CMF C2 H8 O2 Si



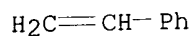
CM 2

CRN 107-13-1
 CMF C3 H3 N



CM 3

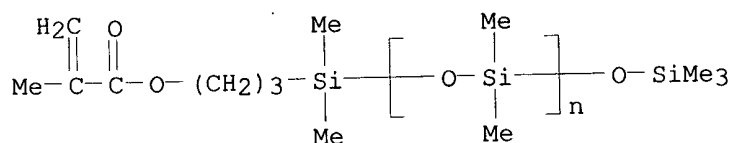
CRN 100-42-5
 CMF C8 H8



RN 172274-74-7 HCAPLUS
 CN 2-Propenenitrile, polymer with .alpha.-[dimethyl[3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl]silyl]-.omega.-[(trimethylsilyl)oxy]poly[oxy(dimethylsilylene)] and ethenylbenzene, block, graft (9CI) (CA INDEX NAME)

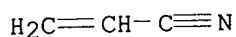
CM 1

CRN 123109-42-2
 CMF (C2 H6 O Si)_n C12 H26 O3 Si2
 CCI PMS



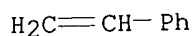
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CRN 107-13-1
 CMF C3 H3 N



CM 3

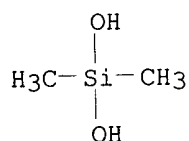
CRN 100-42-5
CMF C8 H8



RN 172274-75-8 HCAPLUS
CN 2-Propenenitrile, polymer with dimethylsilanediol and ethenylbenzene,
block, graft (9CI) (CA INDEX NAME)

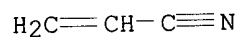
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CRN 1066-42-8
CMF C2 H8 O2 Si



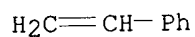
CM 2

CRN 107-13-1
CMF C3 H3 N



CM 3

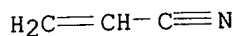
CRN 100-42-5
CMF C8 H8



IT 9003-56-9, Stylac ABS 283
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(thermoplastic resin **compns.** contg. **acrylic**
siloxane **lubricants**)
RN 9003-56-9 HCAPLUS
CN 2-Propenenitrile, polymer with 1,3-butadiene and ethenylbenzene (9CI) (CA
INDEX NAME)

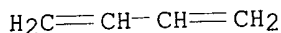
CM 1

CRN 107-13-1
CMF C3 H3 N



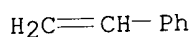
CM 2

CRN 106-99-0
CMF C4 H6



CM 3

CRN 100-42-5
CMF C8 H8



L46 ANSWER 20 OF 52 HCAPLUS COPYRIGHT 2001 ACS
AN 1995:884607 HCAPLUS
DN 123:315831
TI **Water**-repellent vinyl chloride resin compositions
IN Myaki, Yoshuki; Sugiura, Yoshihiko
PA Tosoh Corp, Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08L027-06
ICS C08L053-00; C08L083-10
CC 37-6 (Plastics Manufacture and Processing)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07216171	A2	19950815	JP 1994-6813	19940126
AB	The comps., giving molded products with low friction and good releasability, useful for agricultural films, etc., contain polymethacrylate -siloxane block copolymers having (SiR1R2O)m(SiR3R4O)n (R1-4 = H, halo, alkyl, aryl, halohydrocarbyl; m, n = 3-1000) blocks with the siloxane block content 0.01-10% (based on the comps.). Thus, 4,4'-azobis(4-cyanopentanoic acid) 5.6, 1,1'-carbonyldiimidazole 7.1, and X 22-161C 90 g were reacted at a room temp. for 5 h in CH2Cl2 to give 93 g macroazo initiator, 12.5 g of which was treated with 250 g Me methacrylate at 70.degree. for 5 h in H2O in the presence of Gohsenol KH 20 and dodecanethiol to give 195 g block polymer (6.0% di-Me siloxane). TH 800 (PVC) 80, the block polymer 20, an Sn-based stabilizer 4.5, and a phosphate stabilizer 0.5 part were blended, kneaded, and pressed to give a plate showing contact angle 85, static friction coeff. 0.22, haze 24, tensile strength 650 kg/cm2, and Charpy impact strength 4.0 kg-cm/cm2.				
ST	polymethacrylate silicone blend PVC repellency; impact resistance PVC silicone blend; antifriction PVC silicone polymethacrylate blend; transparency PVC silicone polymethacrylate blend				
IT	Siloxanes and Silicones, preparation RL: IMF (Industrial manufacture); MOA (Modifier or additive use) ; PREP (Preparation); USES (Uses)				

KATHLEEN FULLER EIC 1700 308-4290

- (**polymethacrylate-**, block; vinyl chloride resin compns. contg. **polymethacrylate-siloxane** block polymers with good **water** repellency and low **friction**)
- IT Impact-resistant materials
Lubricants
 Transparent materials
Water-resistant materials
 (vinyl chloride resin compns. contg. **polymethacrylate-siloxane** block polymers with good **water** repellency and low **friction**)
- IT 9002-86-2, PVC
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (TH 800; vinyl chloride resin compns. contg. **polymethacrylate-siloxane** block polymers with good **water** repellency and low **friction**)
- IT 80-62-6DP, Methyl **methacrylate**, polymers with siloxanes, block
 RL: IMF (Industrial manufacture); MOA (**Modifier or additive use**); PREP (Preparation); USES (Uses)
 (vinyl chloride resin compns. contg. **polymethacrylate-siloxane** block polymers with good **water** repellency and low **friction**)

L46 ANSWER 21 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1995:856461 HCAPLUS

DN 123:316640

TI Lubricating rubber compositions with excellent abrasion resistance

IN Oki, Yoshiro; Minamoto, Ichiro

PA Ntn Toyo Bearing Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L021-00

ICS C08K007-18; C08L027-18

CC 39-9 (Synthetic Elastomers and Natural Rubber)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07188470	A2	19950725	JP 1993-330180	19931227
AB	The compns. comprise synthetic org. rubbers, powd. tetrafluoroethylene resins sticking carbon materials, and spherical graphite. Thus, 100 parts JSR-N 230S was blended with stearic acid 1, carbon black 30, vulcanization accelerators 4, DOP 10, ZnO 1, and S 0.5 part, further blended with 10 parts PTFE/graphite coppt. and 30 parts Bellpearl C 2000 (spherical graphite), kneaded with a roll, press molded at 150.degree., and post-vulcanized at 180.degree. to give a sheet showing friction coeff. 0.40, abrasion coeff. 85 .times. 10-10 cm ³ /kg-m, contact angle <60 against H2O , tensile strength 180 kg/cm ² , elongation 500%, and JIS-A hardness 70.				
ST	nitrile rubber lubricant PTFE graphite; abrasion resistance rubber lubricating				
IT	Rubber, urethane, properties RL: POF (Polymer in formulation); PRP (Properties); USES (Uses) (Miractran E 270PEND; abrasion-resistant lubricating rubber compns. contg. PTFE and graphite)				
IT	Lubricants (PTFE and graphite; abrasion-resistant lubricating rubber compns. contg. PTFE and graphite)				
IT	Abrasion-resistant materials (abrasion-resistant lubricating rubber compns. contg. PTFE and graphite)				
IT	Rubber, nitrile, properties RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)				

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(abrasion-resistant lubricating rubber compns. contg. PTFE and graphite)

IT Rubber, synthetic
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (ethylene-ethylidenenorbornene-propene, JSR-EP 33; abrasion-resistant lubricating rubber compns. contg. PTFE and graphite)

IT Rubber, synthetic
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (hexafluoropropene-vinylidene fluoride, Tecnoflon F 5350; abrasion-resistant lubricating rubber compns. contg. PTFE and graphite)

IT Rubber, butadiene, properties
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (hydroxy-terminated, Poly bd-R 45HT; abrasion-resistant lubricating rubber compns. contg. PTFE and graphite)

IT **7440-44-0**, Mesocarbon Microbeads, properties **7782-42-5**, Graphite, properties 9002-84-0, PTFE 122302-73-2, Bellpearl C 2000
 RL: **MOA (Modifier or additive use)**; PRP (Properties); USES (Uses)
 (abrasion-resistant lubricating rubber compns. contg. PTFE and graphite)

IT **9003-18-3**
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (rubber, abrasion-resistant lubricating rubber compns. contg. PTFE and graphite)

IT 9003-17-2
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (rubber, hydroxy-terminated, Poly bd-R 45HT; abrasion-resistant lubricating rubber compns. contg. PTFE and graphite)

IT **7440-44-0**, Mesocarbon Microbeads, properties **7782-42-5**, Graphite, properties
 RL: **MOA (Modifier or additive use)**; PRP (Properties); USES (Uses)
 (abrasion-resistant lubricating rubber compns. contg. PTFE and graphite)

RN 7440-44-0 HCAPLUS
 CN Carbon (7CI, 8CI, 9CI) (CA INDEX NAME)

C

RN 7782-42-5 HCAPLUS
 CN Graphite (8CI, 9CI) (CA INDEX NAME)

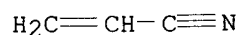
C

IT **9003-18-3**
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (rubber, abrasion-resistant lubricating rubber compns. contg. PTFE and graphite)

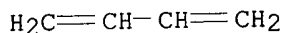
RN 9003-18-3 HCAPLUS
 CN 2-Propenenitrile, polymer with 1,3-butadiene (9CI) (CA INDEX NAME)

CM 1

CRN 107-13-1
 CMF C3 H3 N



CM 2

CRN 106-99-0
CMF C4 H6

L46 ANSWER 22 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1995:856460 HCAPLUS

DN 123:316639

TI Lubricating rubber compositions with excellent abrasion resistance

IN Oki, Yoshiro; Minamoto, Ichiro

PA Ntn Toyo Bearing Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L009-02

ICS C08K007-18; C08L027-18

CC 39-9 (Synthetic Elastomers and Natural Rubber)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07188469	A2	19950725	JP 1993-329414	19931227
	JP 11080428	A2	19990326	JP 1998-191530	19931227
PRAI	JP 1993-329414		19931227		

AB The compns. comprise **acrylonitrile**-butadiene rubber, powd. tetrafluoroethylene resins sticking carbon materials, and spherical graphite. Thus, 100 parts JSR-N 230S was blended with stearic acid 1, carbon black 30, vulcanization accelerators 4, DOP 10, ZnO 1, and S 0.5 part, further blended with 10 parts PTFE/graphite coppt. and 30 parts Bellpearl C 2000 (spherical graphite), kneaded with a roll, press molded at 150.degree., and post-vulcanized at 180.degree. to give a sheet showing **friction** coeff. 0.40, abrasion coeff. 85 .times. 10-10 cm³/kg-m, contact angle <60 against **H₂O**, tensile strength 180 kg/cm², elongation 500%, and JIS-A hardness 70.

ST nitrile rubber lubricant PTFE graphite; abrasion resistance nitrile rubber

IT **Lubricants**

(PTFE and graphite; abrasion-resistant lubricating nitrile rubber compns. contg. PTFE and graphite)

IT Abrasion-resistant materials

(abrasion-resistant lubricating nitrile rubber compns. contg. PTFE and graphite)

IT Rubber, nitrile, properties

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)

(abrasion-resistant lubricating nitrile rubber compns. contg. PTFE and graphite)

IT **7440-44-0**, Mesocarbon Microbeads, properties **7782-42-5**,

Graphite, properties 9002-84-0, PTFE 122302-73-2, Bellpearl C 2000

RL: **MOA (Modifier or additive use)**; PRP (Properties); USES

(Uses)

(abrasion-resistant lubricating nitrile rubber compns. contg. PTFE and graphite)

IT **9003-18-3**

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)

(rubber, abrasion-resistant lubricating nitrile rubber compns. contg. PTFE and graphite)

IT **7440-44-0**, Mesocarbon Microbeads, properties **7782-42-5**,

Graphite, properties

RL: **MOA (Modifier or additive use)**; PRP (Properties); USES

KATHLEEN FULLER EIC 1700 308-4290

(Uses)

(abrasion-resistant lubricating nitrile rubber compns. contg. PTFE and graphite)

RN 7440-44-0 HCAPLUS
 CN Carbon (7CI, 8CI, 9CI) (CA INDEX NAME)

C

RN 7782-42-5 HCAPLUS
 CN Graphite (8CI, 9CI) (CA INDEX NAME)

C

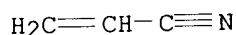
IT 9003-18-3

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (rubber, abrasion-resistant lubricating nitrile rubber compns. contg. PTFE and graphite)

RN 9003-18-3 HCAPLUS
 CN 2-Propenenitrile, polymer with 1,3-butadiene (9CI) (CA INDEX NAME)

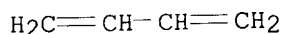
CM 1

CRN 107-13-1
 CMF C3 H3 N



CM 2

CRN 106-99-0
 CMF C4 H6



L46 ANSWER 23 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1995:773090 HCAPLUS

DN 123:230284

TI Polymer compositions giving transparent films with good printability and lubricating ability

IN Maeda, Yoshiharu; Kojima, Shiro

PA Toa Gosei Kk, Japan

SO Jpn. Kokai Tokyo Koho, 3 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L023-00

ICS C08L083-10

ICA C08F290-06

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07138415	A2	19950530	JP 1993-311144	19931117
			KATHLEEN FULLER	EIC 1700 308-4290	

- AB Title compns., useful for food packaging materials, contain polyolefins and silicone graft polymers. Thus, a mixed liq. contg. AK 31 (**methacryloyl**-terminated silicone macromonomer) 30, Me **methacrylate** 60, styrene 10, dodecyl mercaptan 1.5, and AIBN 2.5 parts was added at 80.degree. to an aq. mixt. contg. a $\text{Ca}_3(\text{PO}_4)_2$ suspension liq. and Na dodecyl naphthalenesulfonate and polymn. was continued at 80.degree. for 7 h to obtain 93 parts of a solid silicone graft polymer, 3 parts of which was kneaded with 100 parts Hipol J 700 at 230.degree., T-die-molded at 230.degree., and bi-oriented at 150.degree. to prep. a 20- μm film showing haze 1.1%, dynamic coeff. of **friction** 0.18, good adhesion to a printing ink, and lamination strength 300 kg/15 mm.
- ST transparency polypropylene film; printability polypropylene film; lubricating ability polypropylene film; silicone graft polymer lubricant polypropylene; **methacryloyl** termination silicone macromonomer copolymer; methyl **methacrylate** graft siloxane lubricant; styrene graft copolymer lubricant polypropylene
- IT **Lubricants**
(polymer compns. giving transparent films with good printability and lubricating ability)
- IT Plastics, film
RL: MSC (Miscellaneous); PRP (Properties)
(polyolefin-silicone graft polymer blend with good transparency and printability and lubricating ability)
- IT Transparent materials
(polyolefin-silicone graft polymer blends for films)
- IT Siloxanes and Silicones, preparation
RL: IMF (Industrial manufacture); **MOA (Modifier or additive use)**; TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**acrylic**, graft, polymer compns. giving transparent films with good printability and lubricating ability)
- IT Alkenes, uses
RL: POF (Polymer in formulation); USES (Uses)
(polymers, polymer compns. giving transparent films with good printability and lubricating ability)
- IT 80-62-6DP, Methyl **methacrylate**, graft copolymer with siloxanes
100-42-5DP, Styrene, graft copolymers with siloxanes
RL: IMF (Industrial manufacture); **MOA (Modifier or additive use)**; PREP (Preparation); USES (Uses)
(**lubricants**; polymer compns. giving transparent films with good printability and lubricating ability)
- IT 9003-07-0, Hipol J 700
RL: POF (Polymer in formulation); USES (Uses)
(polymer compns. giving transparent films with good printability and lubricating ability)
- L46 ANSWER 24 OF 52 HCAPLUS COPYRIGHT 2001 ACS
- AN 1994:461008 HCAPLUS
- DN 121:61008
- TI Use of **solid lubricant** coatings in pneumatic cylinders
- AU Nesterov, A. V.; Zaslavskiy, R. N.; Girsh, R. I.; Dyakin, S. I.
- CS ELINP, Russia
- SO Khim. Tekhnol. Topl. Masel (1994), (2), 15-16
CODEN: KTPMAG; ISSN: 0023-1169
- DT Journal
- LA Russian
- CC 51-8 (Fossil **Fuels**, Derivatives, and Related Products)
Section cross-reference(s): 38, 42, 55
- AB **Solid lubricant** coatings (polymer forming compns. under **friction**) in the lubrication of the rubber V 14-steel 45 pair were studied as it relates to pneumatic cylinder. The EF-16 compn. was recommended for use on contact surfaces of pneumatic cylinders instead of chrome-plating.

KATHLEEN FULLER EIC 1700 308-4290

ST **solid lubricant** coating pneumatic cylinder; polymer
coating pneumatic cylinder lubrication; corrosion prevention polymer
pneumatic cylinder lubrication

IT Rubber, nitrile, miscellaneous
RL: MSC (Miscellaneous)
(**friction** pair contg. steel and, polymer forming compns. in
lubrication of)

IT Lubricants
(solid, polymer coatings, for pneumatic cylinders)

IT 37268-90-9, Steel 45, uses
RL: USES (Uses)
(**friction** pair contg. rubber V 14 and, polymer forming
compns. in lubrication of)

IT **9003-18-3**
RL: USES (Uses)
(rubber, **friction** pair contg. steel and, polymer forming
compns. in lubrication of)

IT 114540-94-2, EF-16
RL: USES (Uses)
(**solid lubricant** coatings, for pneumatic cylinders)

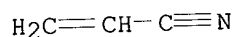
IT **9003-18-3**
RL: USES (Uses)
(rubber, **friction** pair contg. steel and, polymer forming
compns. in lubrication of)

RN 9003-18-3 HCAPLUS
CN 2-Propenenitrile, polymer with 1,3-butadiene (9CI) (CA INDEX NAME)

CM 1

CRN 107-13-1

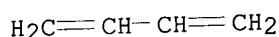
CMF C3 H3 N



CM 2

CRN 106-99-0

CMF C4 H6



L46 ANSWER 25 OF 52 HCAPLUS COPYRIGHT 2001 ACS
AN 1994:413695 HCAPLUS
DN 121:13695
TI **Friction** modifiers
IN Chiddick, Kelvin S.
PA Century Oils, Inc., Can.
SO U.S., 6 pp. Cont.-in-part of U.S. 5,173,204.
CODEN: USXXAM
DT Patent
LA English
IC ICM **C10M111-04**
ICS **C10M169-04**
NCL 252030000
CC 51-8 (Fossil **Fuels**, Derivatives, and Related Products)
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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KATHLEEN FULLER EIC 1700 308-4290

PI	US 5308516	A	19940503	US 1992-886615	19920520
	ZA 9004343	A	19920930	ZA 1990-4343	19900606
	US 5173204	A	19921222	US 1991-769578	19911002
PRAI	US 1989-364453		19890608		
	US 1990-492815		19900313		
	GB 1991-10979		19910521		
	US 1991-769578		19911002		

AB **Friction** modifiers are compn. which modify the coeff. of **friction** between surfaces to which the **friction** modifier is applied. They are similar in nature to lubricants but have different characteristics in certain respects. The invention relates particularly to solid **friction** modifiers which may be rigid or flexible. These **friction** modifiers comprise 20-80% by wt. of a polymer medium, 5-20% by wt. of a **solid lubricant** and 15-60% by wt. of a **friction** enhancer. The compn. produces a coeff. of **friction** which rises to above 0.20 at creepage level up to 2.5% between steel bodies in rolling-sliding contact lubricated using the compn.

ST **friction** modifier steel contact surface; polymer resin
friction modifier; **solid lubricant**
friction modifier steel

IT Epoxy resins, uses
Polyesters, uses
Urethane polymers, uses
RL: USES (Uses)
(**friction** modifier compns. contg., for steel bodies in rolling-sliding contact)

IT Slate
Asbestos
Bentonite, uses
Kieselguhr
RL: USES (Uses)
(powd., **friction** modifier compns. contg., for steel bodies in rolling-sliding contact)

IT Urethane polymers, uses
RL: USES (Uses)
(**acrylic**, **friction** modifier compns. contg., for steel bodies in rolling-sliding contact)

IT Naphthenic acids, uses
RL: CAT (Catalyst use); USES (Uses)
(cobalt salts, catalyst, **friction** modifier compns. contg., for steel bodies rolling-sliding contact)

IT Coal
RL: USES (Uses)
(dust, **friction** modifier compns. contg., for steel bodies in rolling-sliding contact)

IT **Acrylic** polymers, uses
RL: USES (Uses)
(polyurethane-, **friction** modifier compns. contg., for steel bodies in rolling-sliding contact)

IT 121-69-7, N,N-Dimethylaniline, uses 1338-23-4, Methyleneethyl ketone peroxide
RL: CAT (Catalyst use); USES (Uses)
(catalyst, **friction** modifier compns. contg., for steel bodies rolling-sliding contact)

IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene
RL: USES (Uses)
(**friction** modifier compns. contg., for steel bodies in rolling-sliding contact)

IT 471-34-1, Calcium carbonate, uses 546-93-0, Magnesium carbonate
557-05-1, Zinc stearate 598-63-0, Lead carbonate 637-12-7, Aluminum stearate 1314-13-2, Zinc oxide, uses 1327-33-9, Antimony oxide
1335-25-7, Lead oxide 1335-30-4, Aluminum silicate 1343-88-0, Magnesium silicate 7631-86-9, Silica, uses 7727-43-7, Barium sulfate
KATHLEEN FULLER EIC 1700 308-4290

7778-18-9, Calcium sulfate 14808-60-7, Quartz, uses 16389-88-1,
Dolomite, uses
RL: USES (Uses)
(powd., **friction** modifier compns. contg., for steel bodies in
rolling-sliding contact)
IT 1317-33-5, Molybdenum disulfide, uses 7782-42-5, Graphite, uses
RL: USES (Uses)
(**solid lubricant**, **friction** modifier
compns. contg., for steel bodies in rolling-sliding contact)
IT 12597-69-2P, Steel, preparation
RL: PREP (Preparation)
(wheel-rail systems, surfaces of, **friction** modifiers compns.
for, for wear and noise redn.)

L46 ANSWER 26 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1994:303133 HCAPLUS

DN 120:303133

TI **Aqueous** lubrication and surface conditioning for formed metal
surfaces

IN Awad, Sami B.; Kelly, Timm L.; Rochfort, Gary L.

PA Henkel Corp., USA

SO PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM **C10M137-04**

ICS **C10M105-18**

CC 51-8 (Fossil **Fuels**, Derivatives, and Related Products)
Section cross-reference(s): 46, 56

FAN.CNT 12

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9401517	A1	19940120	WO 1993-US6359	19930708
W: AU, BR, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
ZA 9304846	A	19940203	ZA 1993-4846	19930706
AU 9346654	A1	19940131	AU 1993-46654	19930708
AU 675800	B2	19970220		
CN 1085244	A	19940413	CN 1993-109893	19930708
EP 649458	A1	19950426	EP 1993-916982	19930708
R: AT, BE, DE, ES, FR, GB, GR, IT, SE				
JP 07509261	T2	19951012	JP 1993-503464	19930708
BR 9306696	A	19981208	BR 1993-6696	19930708
EP 969078	A2	20000105	EP 1999-203252	19930708
EP 969078	A3	20000223		
R: AT, BE, DE, ES, FR, GB, GR, IT, SE				
PRAI US 1992-910483	A	19920708		
EP 1993-916982	A3	19930708		
WO 1993-US6359	A	19930708		

AB A lubricant and surface conditioner for formed metal surfaces,
particularly beverage containers, reduces the coeff. of static
friction of the metal surfaces and enables drying the metal
surfaces at a lower temp. The conditioner is formed by contacting the
metal surface with an **aq.** compn. that includes a **water**
-sol. org. material selected from a phosphate ester, alc., fatty acid
including mono-, di-, tri-, and polyacids; fatty acid derivs. such as
salts, hydroxy acids, amides, esters, ethers and derivs. thereof; and
mixts. thereof.

ST lubricant surface conditioner metal can

IT Alcohols, compounds

RL: USES (Uses)

(C12-15, ethoxylated, **water** sol. **lubricant** and
surface conditioner **compn.** contg., for lower temp. drying of
washed metal cans)

KATHLEEN FULLER EIC 1700 308-4290

- IT Alcohols, compounds
 RL: USES (Uses)
 (C12-15, ethoxylated propoxylated, **water sol. lubricant** and surface conditioner **compn.** contg., for lower temp. drying of washed metal cans)
- IT Fatty acids, polymers
 RL: USES (Uses)
 (C18-unsatd., dimers, **water sol. lubricant** and surface conditioner **compn.** contg., for lower temp. drying of washed metal cans, Empol 21)
- IT Alcohols, compounds
 RL: USES (Uses)
 (C9-11, ethoxylated, **water sol. lubricant** and surface conditioner **compn.** contg., for lower temp. drying of washed metal cans)
- IT Cans
 (beverage, **aq. lubricant** and surface conditioner **compn.** for, with lower temp. drying)
- IT Quaternary ammonium compounds, uses
 RL: USES (Uses)
 (bis(2-hydroxypropyl)methyltallow alkyl, chlorides, **water sol. lubricant** and surface conditioner **compn.** contg., for lower temp. drying of washed metal cans)
- IT Quaternary ammonium compounds, compounds
 RL: USES (Uses)
 (coco alkylbis(hydroxyethyl)methyl, ethoxylated, chlorides, **water sol. lubricant** and surface conditioner **compn.** contg., for lower temp. drying of washed metal cans)
- IT Amines, oxides
 RL: USES (Uses)
 (coco alkyldimethyl, N-oxides, **water sol. lubricant** and surface conditioner **compn.** contg., for lower temp. drying of washed metal cans)
- IT Castor oil
 RL: USES (Uses)
 (hydrogenated, ethoxylated, **water sol. lubricant** and surface conditioner **compn.** contg., for lower temp. drying of washed metal cans)
- IT Lubricants
 (**water**-based, for metal cans, for lower temp. drying of washed metal cans)
- IT 57-10-3, Emersol 143, uses 57-11-4, Emersol 153 NF, uses 93-82-3
 97-78-9, Hamposyl L 110-25-8, Hamposyl O 112-80-1, Emersol 6313 NF, uses 120-40-1 123-99-9, Emery 1110, uses 124-07-2, Emery 657, uses 142-48-3, Hamposyl S 143-07-7, Emery 651, uses 334-48-5, Emery 659 544-63-8, Emery 655, uses 577-11-7, Triton GR-7M **7429-90-5**, Aluminum, uses 7439-89-6, Iron, uses 7439-98-7, Molybdenum, uses 7440-03-1, Niobium, uses 7440-25-7, Tantalum, uses **7440-31-5**, Tin, uses 7440-32-6, Titanium, uses 7440-33-7, Tungsten, uses 7440-45-1, Cerium, uses 7440-58-6, Hafnium, uses 7440-62-2, Vanadium, uses 7440-67-7, Zirconium, uses 7488-55-3, Tin sulfate (Sn(SO4)) 7545-23-5 7550-45-0, Titanium chloride (TiCl4), uses 7646-78-8, Tin chloride (SnCl4), uses 7705-08-0, Ferric chloride, uses 7783-50-8, Iron fluoride (FeF3) 7783-68-8, Niobium fluoride (NbF5) 7783-71-3, Tantalum fluoride (TaF5) 7783-72-4, Vanadium fluoride (VF5) 7790-87-6, Cerium iodide (CeI3) 9002-92-0 9002-93-1, Triton X 101 **9003-04-7**, Acusol 410N 9004-96-0, Emulphor 24 9016-45-9, Igepal CO-887 9084-06-4, Lomar D 10028-22-5, Ferric sulfate 10031-26-2, Iron bromide (FeBr3) 10043-01-3, Aluminum sulfate 10049-12-4, Vanadium fluoride (VF3) 10049-16-8, Vanadium fluoride (VF4) 10421-48-4, Iron nitrate (Fe(NO3)3) 11105-10-5, Triton QS 15 12021-47-5 12021-95-3 12626-49-2, Dowfax 2A1 12676-21-0, Armeen Z 12680-53-4, Triton DF-18 12688-28-7, Neodol 25-3S 12765-39-8, Igepon TC-42 13093-17-9, Cerium nitrate (Ce(NO3)4) 13106-76-8 13454-94-9

KATHLEEN FULLER EIC 1700 308-4290

13473-90-0, Aluminum nitrate (Al(NO₃)₃) 15855-70-6 16919-31-6
 17439-11-1, Hydrogen titanium fluoride (H₂TiF₆) 26885-07-4, Igepon TK-32
 27252-75-1 27774-13-6, Vanadium oxide sulfate (VOSO₄) 28724-32-5,
 Ethoquad 18/5 28880-55-9 30399-84-9, Emersol 871 37211-53-3, Triton
 CF-21 37281-47-3, Triton DF-12 37281-48-4, Triton H-66 39464-66-9
 50925-57-0, Aromox C/12 51811-79-1, Gafac PE510 52019-36-0, Gafac RA
 600 52623-95-7, Triton QS-44 52794-79-3 56002-14-3, Ethox M15
 56833-50-2, Neodol 25-3A 58229-81-5, Triton DF-16 58967-79-6, Triton
 H-55 60371-17-7, Antarox LF-330 60828-78-6, Tergitol TMN-6
 70431-21-9, Surfonic LF-17 77323-37-6, Gafac BH 650 88651-29-0,
 Hamposyl C 92529-60-7, Triton X 120 106392-12-5, Pluronic 150R1
 110617-70-4, Tetronic 701 121182-00-1, Ethfac 136 125121-47-3, Avanel
 S 70 128664-37-9, APG 300 138726-29-1, Ethox 2684 153966-45-1,
 Dyasulf 9268A 153966-53-1, Gafac BL 750 153966-56-4, Dyasulf C 70
 153966-83-7, Neodol 25-5-3 153966-96-2, Ethox PP 16 153967-14-7,
 Trycol 6720

RL: USES (Uses)

(water sol. lubricant and surface conditioner

compn. contg., for lower temp. drying of washed metal cans)

IT 7429-90-5, Aluminum, uses 7440-31-5, Tin, uses
 9003-04-7, Acusol 410N

RL: USES (Uses)

(water sol. lubricant and surface conditioner

compn. contg., for lower temp. drying of washed metal cans)

RN 7429-90-5 HCAPLUS

CN Aluminum (8CI, 9CI) (CA INDEX NAME)

Al

RN 7440-31-5 HCAPLUS

CN Tin (8CI, 9CI) (CA INDEX NAME)

Sn

RN 9003-04-7 HCAPLUS

CN 2-Propenoic acid, homopolymer, sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 9003-01-4

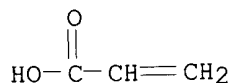
CMF (C₃ H₄ O₂)x

CCI PMS

CM 2

CRN 79-10-7

CMF C₃ H₄ O₂



L46 ANSWER 27 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1993:519280 HCAPLUS

DN 119:119280

TI Rubber compositions for sliding parts

IN Yamagishi, Takahiro

KATHLEEN FULLER EIC 1700 308-4290

PA Koyo Seiko Co, Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C08L021-00
 ICS C08K003-36; C08K005-54; C08L083-04; F16J015-10
 CC 39-9 (Synthetic Elastomers and Natural Rubber)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05093095	A2	19930416	JP 1991-88759	19910419

AB The title **compsn.**, useful for **oil** seals, etc., contain rubber base materials, powd. or granulated **lubricants** (comprising liq. **lubricants** and inorg. carriers contg. and releasing the liq. **lubricants** by kneading), and couplers. Thus, nitrile rubber 100, ZnO 20, stearic acid 1.5, an **antioxidant** 2, FEF carbon and talc 80, S 0.5, a plasticizer 5, dimethylsilicone **oil**-contg. SiO₂ 5, .gamma.-mercaptopropyltrimethoxysilane 0.5, and vulcanization accelerators 5 parts were roll kneaded to obtain a compn. showing tensile strength 125 kg/cm², elongation 295%, and **friction** coeff. 1.43.

ST sliding material rubber **compn lubricant**; coupling agent rubber sliding material

IT Rubber, nitrile, uses
 RL: USES (Uses)
 (sliding materials, contg. powd. or granular lubricants and coupling agents)

IT Lubricants
 (supported on inorg. compds., powd. or granular, for nitrile rubber sliding materials)

IT Siloxanes and Silicones, uses
 RL: USES (Uses)
 (di-Me, lubricants, powd. or granular silica-supported F 250, for nitrile rubber sliding materials)

IT 7631-86-9, Silica, uses
 RL: USES (Uses)
 (powd. or granular, supported with liq. dimethylsilicone **oils**, lubricants for nitrile rubber sliding materials)

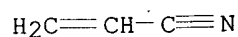
IT **9003-18-3**
 RL: USES (Uses)
 (rubber, sliding materials, contg. powd. or granular lubricants and coupling agents)

IT **9003-18-3**
 RL: USES (Uses)
 (rubber, sliding materials, contg. powd. or granular lubricants and coupling agents)

RN 9003-18-3 HCAPLUS
 CN 2-Propenenitrile, polymer with 1,3-butadiene (9CI) (CA INDEX NAME)

CM 1

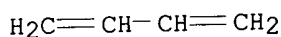
CRN 107-13-1
 CMF C3 H3 N



CM . 2

CRN 106-99-0
 CMF C4 H6

KATHLEEN FULLER EIC 1700 308-4290



L46 ANSWER 28 OF 52 HCAPLUS COPYRIGHT 2001 ACS
 AN 1993:216299 HCAPLUS
 DN 118:216299
 TI **Friction** modifiers
 IN Chiddick, Kelvin S.
 PA Century Oils (Canada) Inc., Can.
 SO Can. Pat. Appl., 19 pp.
 CODEN: CPXXEB
 DT Patent
 LA English
 IC ICM C10M107-00
 CC 51-8 (Fossil **Fuels**, Derivatives, and Related Products)
 Section cross-reference(s): 55

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CA 2069035	AA	19921122	CA 1992-2069035	19920520
PRAI	GB 1991-10979		19910521		
AB	Friction modifiers are compns. which modify the coeff. of friction between surfaces to which the friction modifier is applied. They are similar to lubricants but have different characteristics in certain respects. The solid friction modifiers which may be rigid or flexible comprise a polymer medium 20-80, a solid lubricant 5-20, and a friction enhancer 15-60%. The compn. produces a coeff. of friction which rises to >0.20 at creepage levels <2.5% between steel bodies in rolling-sliding contact lubricated using the compn. A friction modifier compn. comprises (a) polyester resin medium .apprx.60, (b) MoS2 solid lubricant .apprx.10, a powd. talc .apprx.30, (d) promoters to improve and speed up the cure rate and gel time .apprx.0.2, and (e) polymn. initiators .apprx.1.4%.				
ST	friction modifier steel contact surface; polymer resin friction modifier; solid lubricant friction modifier steel				
IT	Epoxy resins, uses Polyesters, uses Urethane polymers, uses RL: USES (Uses) (friction modifier compns. contg., for steel bodies in rolling-sliding contact)				
IT	Bentonite, uses Kaolin, uses Kieselguhr RL: USES (Uses) (powd., friction modifier compns. contg., for steel bodies in rolling-sliding contact)				
IT	Urethane polymers, uses RL: USES (Uses) (acrylic , friction modifier compns. contg., for steel bodies in rolling-sliding contact)				
IT	Naphthenic acids, compounds RL: CAT (Catalyst use); USES (Uses) (cobalt salts, catalyst, friction modifier compns. contg., for steel bodies rolling-sliding contact)				
IT	Polyolefin fibers RL: USES (Uses) (ethylene, powd., friction modifier compns. contg., for steel bodies in rolling-sliding contact)				

KATHLEEN FULLER EIC 1700 308-4290

- IT **Acrylic polymers, uses**
 RL: USES (Uses)
 (polyurethane-, **friction** modifier compns. contg., for steel bodies in rolling-sliding contact)
- IT 121-69-7, N,N-Dimethylaniline, uses 1338-23-4, Methylene ketone peroxide
 RL: CAT (Catalyst use); USES (Uses)
 (catalyst, **friction** modifier compns. contg., for steel bodies rolling-sliding contact)
- IT 7631-86-9, Silica, uses 9002-88-4, Polyethylene 9003-07-0, Polypropylene
 RL: USES (Uses)
 (**friction** modifier compns. contg., for steel bodies in rolling-sliding contact)
- IT 471-34-1, Calcium carbonate, uses 546-93-0 557-05-1, Zinc stearate 598-63-0, Lead carbonate 637-12-7, Aluminum stearate 1314-13-2, Zinc oxide, uses 1319-46-6, Basic lead carbonate 1327-33-9, Antimony oxide 1335-25-7, Lead oxide 1335-30-4, Aluminum silicate 1343-88-0, Magnesium silicate 7727-43-7, Blanc Fixe 7778-18-9, Calcium sulfate 13462-86-7, Barite 14807-96-6, Talc, uses 14808-60-7, Quartz, uses 16389-88-1, Dolomite, uses
 RL: USES (Uses)
 (powd., **friction** modifier compns. contg., for steel bodies in rolling-sliding contact)
- IT 1317-33-5, Molybdenum disulfide, uses 7782-42-5, Graphite, uses
 RL: USES (Uses)
 (**solid lubricant, friction** modifier compns. contg., for steel bodies in rolling-sliding contact)
- IT 12597-69-2P, Steel, preparation
 RL: PREP (Preparation)
 (wheel-rail systems, surfaces of, **friction** modifiers compns. for, for wear and noise redn.)
- L46 ANSWER 29 OF 52 HCAPLUS COPYRIGHT 2001 ACS
 AN 1990:160243 HCAPLUS
 DN 112:160243
 TI **Lubricant diene rubber compositions** containing polyurethanes
 IN Satoji, Fumitada
 PA NTN-Rulon Industries Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C08G018-69
 ICS C08L009-00
 CC 39-9 (Synthetic Elastomers and Natural Rubber)
 FAN.CNT 1
- | | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--|------|----------|-----------------|----------|
| PI | JP 01197518 | A2 | 19890809 | JP 1988-23424 | 19880202 |
| | JP 2636867 | B2 | 19970730 | | |
| | US 4978463 | A | 19901218 | US 1989-304290 | 19890131 |
| | US 4976880 | A | 19901211 | US 1990-520322 | 19900507 |
| | US 34830 | E | 19950117 | US 1994-199898 | 19940222 |
| PRAI | JP 1988-23424 | | 19880202 | | |
| | US 1989-304290 | | 19890131 | | |
| AB | The title compns., with good retention of sealing properties, oil and wear resistance, elasticity, mech. strength, etc., contain (a) diene rubbers, (b) OH-contg. liq. diene polymers, (c) polyisocyanates, and (d) siloxanes or F-contg. polymers contg. amine, CO ₂ H, OH, and/or SH groups. Thus, JSR 1502 100, Poly bd R-45HT (I) 12.5, TDI 0.9, Fomblin Z DOL-2000 [II, OH-contg. poly(fluoro ether)] 10, dibutyltin laurate 0.1, C black 30, CaCO ₃ 100, S 1.8, vulcanization aids 6, vulcanization accelerators 1.8,
KATHLEEN FULLER EIC 1700 308-4290 | | | | |

DOP 30, and an **antioxidant** 1.5 parts were mixed, press vulcanized at 170.degree. for 5 min, and molded to give a plate showing tensile breaking strength 85 kg/cm², tensile breaking elongation 600%, rigidity (JIS A) 50, and **friction** coeff. 0.72, vs. 90, 620, 50, and 1.48, resp., for a plate without I, II, and TDI.

ST lubricant diene rubber blend polyurethane; SBR rubber blend polyurethane
 IT lubricant; polyfluoroether polyurethane diene rubber lubricant
 IT Rubber, butadiene-styrene, uses and miscellaneous
 RL: USES (Uses)
 (blends of polyurethanes and siloxanes or fluoropolymers with JSR 1502, lubricant)

IT Rubber, neoprene, uses and miscellaneous
 RL: USES (Uses)
 (blends with polyurethanes and siloxanes or fluoropolymers, lubricant)

IT Rubber, nitrile, uses and miscellaneous
 RL: USES (Uses)
 (blends with polyurethanes, JSR 237H, lubricant, with retention of mech. properties)

IT Fluoropolymers
 Urethane polymers, uses and miscellaneous
 RL: USES (Uses)
 (diene rubbers contg., lubricant)

IT Lubricants
 (diene rubbers contg., siloxanes or fluoropolymers as, with retention of mech. properties)

IT Siloxanes and Silicones, uses and miscellaneous
 RL: USES (Uses)
 (polyurethane-, diene rubbers contg., lubricant)

IT Urethane polymers, uses and miscellaneous
 RL: USES (Uses)
 (siloxane-, diene rubbers contg., lubricant)

IT 678-39-7 34143-74-3 125998-65-4 125998-66-5 125998-67-6
 RL: USES (Uses)
 (diene rubbers contg., lubricant, with retention of mech. properties)

IT 9003-55-8
 RL: USES (Uses)
 (rubber, blends of polyurethanes and siloxanes or fluoropolymers with JSR 1502, lubricant)

IT 9010-98-4
 RL: USES (Uses)
 (rubber, blends with polyurethanes and siloxanes or fluoropolymers, lubricant)

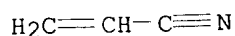
IT 9003-18-3
 RL: USES (Uses)
 (rubber, blends with polyurethanes, JSR 237H, lubricant, with retention of mech. properties)

IT 9003-18-3
 RL: USES (Uses)
 (rubber, blends with polyurethanes, JSR 237H, lubricant, with retention of mech. properties)

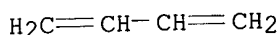
RN 9003-18-3 HCAPLUS
 CN 2-Propenenitrile, polymer with 1,3-butadiene (9CI) (CA INDEX NAME)

CM 1

CRN 107-13-1
 CMF C3 H3 N



CRN 106-99-0
CMF C4 H6



L46 ANSWER 30 OF 52 HCAPLUS COPYRIGHT 2001 ACS
AN 1990:159728 HCAPLUS
DN 112:159728
TI Extrusion formulation package for thermally sensitive resins, polymeric composition containing the package and fabricated articles therefrom
IN Hall, Mark J.; Jenkins, Steven R.; Betso, Stephen R.; Kirkpatrick, Donald E.; Stevenson, James A.; Ross, Robert P.
PA Dow Chemical Co., USA
SO PCT Int. Appl., 55 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C08K005-02
ICS C08L027-08; B29C045-02
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8908680	A1	19890921	WO 1989-US887	19890304
W: AU, JP, KR				
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
AU 8932869	A1	19891005	AU 1989-32869	19890304
AU 631787	B2	19921210		
EP 403542	A1	19901227	EP 1989-903646	19890304
EP 403542	B1	19961016		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
JP 03504023	T2	19910905	JP 1989-503347	19890304
JP 2801323	B2	19980921		
CA 1337833	A1	19951226	CA 1989-592863	19890306
PRAI US 1988-164741		19880307		
WO 1989-US887		19890304		

AB The title **compn.** comprises a vinylidene chloride (I) copolymer (59.8-99.7 wt.% I) blended with 0.3-40.2 wt.% extrusion formulation package; the package comprises 0.05-5 wt.% alkali metal or alk. earth metal salt of a weak acid and the remainder of the package comprises .gtoreq.2 components selected from (a) ethylene polymer contg. a minor amt. of comonomer, capable of lowering the **friction** coeff. of I copolymer, (b) plasticizer, and (c) .gtoreq.1 external **lubricant** selected from (1) oxidized polyolefins (other than polyethylene) and (2) polyolefin waxes or **oils**. Thus, a homogeneous mixt. of Mg(OH)2 0.65, HD 65053N (high-d. polyethylene) 1.5, Vikoflex 7177 (epoxidized soybean **oil** 1, oxidized 0.3, polyethylene wax 0.7 wt.%, and the balance I-Me **acrylate** copolymer was prepd. by dry blending; extruding through a twin-screw extruder, and/or pelletizing gave materials with good color, low carbon contamination (by visual detn.) and good melt adhesion property (detd. by 2-roll mill test procedure).

ST vinylidene chloride copolymer compn extrusion; polyethylene vinylidene chloride copolymer blend extrusion; discoloration prevention extrusion vinylidene chloride copolymer; heat sensitive polymer extrusion

IT Plasticizers
(epoxidized **oils** and sebacate esters, for extrudable vinylidene chloride copolymer compns.)

IT Paraffin **oils**
Paraffin waxes and Hydrocarbon waxes, uses and miscellaneous
KATHLEEN FULLER EIC 1700 308-4290

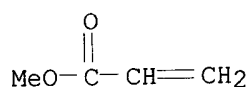
- RL: USES (Uses)
(external **lubricants**, for extrudable vinylidene chloride copolymer **compns.**)
- IT Discoloration prevention
(in extrusion of vinylidene chloride copolymer **compns.**, extrusion formulation package for)
- IT Extrusion of plastics and rubbers
(of vinylidene chloride copolymer-polyethylene blends, discoloration prevention in)
- IT Calendering
(of vinylidene chloride copolymer-polyethylene **compns.**, discoloration prevention in)
- IT Polymer degradation
(prevention of, in extrusion of vinylidene chloride copolymer **compns.**)
- IT Dehydrochlorination
(prevention of, in extrusion of vinylidene chloride copolymer **compns.**, extrusion formulation package for)
- IT Heat-sensitive materials
(vinylidene chloride copolymer **compns.**, extrusion formulation package for)
- IT Containers
(vinylidene chloride copolymer-ethylene polymer **compns.** for, extrudable)
- IT Molding of plastics and rubbers
(blow, of vinylidene chloride copolymer-polyethylene **compns.**, discoloration prevention in)
- IT Extrusion of plastics and rubbers
(co-, of vinylidene chloride copolymer-polyethylene blends, discoloration prevention in)
- IT Soybean oil
RL: MOA (Modifier or additive use); USES (Uses)
(epoxidized, plasticizers, Vikoflex 7177, for vinylidene chloride copolymer-polyethylene extrudable **compns.**)
- IT Linseed oil
RL: MOA (Modifier or additive use); USES (Uses)
(epoxidized, plasticizers, for extrudable vinylidene chloride copolymer **compns.**)
- IT **Lubricants**
(external, oxidized polyolefins and polyolefins, for extrudable vinylidene chloride copolymer **compns.**)
- IT Molding of plastics and rubbers
(injection, of vinylidene chloride copolymer-polyethylene **compns.**, discoloration prevention in)
- IT Adhesion
(melt, prevention of, in extrusion of vinylidene chloride copolymer **compns.**, extrusion formulation package for)
- IT Alkenes, polymers
RL: USES (Uses)
(polymers, oxidized, **lubricants**, for extrudable vinylidene chloride copolymer **compns.**)
- IT 7647-01-0
RL: USES (Uses)
(dehydrochlorination, prevention of, in extrusion of vinylidene chloride copolymer **compns.**, extrusion formulation package for)
- IT 50813-15-5, Allied 629A
RL: USES (Uses)
(extrusion aids, for vinylidene chloride copolymer **compn.**)
- IT 9002-88-4D, Polyethylene, oxidized
RL: USES (Uses)
(**lubricants**, for extrudable vinylidene chloride copolymer **compns.**)
- IT 109-43-3
RL: MOA (Modifier or additive use); USES (Uses)
(plasticizers, for extrudable vinylidene chloride copolymer **compns.**)

KATHLEEN FULLER EIC 1700 308-4290

IT 9011-06-7, Vinyl chloride-vinylidene chloride copolymer **25038-72-6**
 , Methyl **acrylate**-vinylidene chloride copolymer
25101-06-8, Ethyl **acrylate**-vinylidene chloride copolymer
 RL: USES (Uses)
 (polyethylene blends, extrudable without discoloration)
 IT 74-85-1D, Ethylene, copolymers 9002-88-4, Polyethylene
 RL: USES (Uses)
 (vinylidene chloride copolymer blends, extrudable)
 IT 1309-42-8, Magnesium hydroxide 1309-48-4, Magnesium oxide, uses and
 miscellaneous 7722-88-5, Tetrasodium pyrophosphate 7758-87-4
 RL: USES (Uses)
 (vinylidene chloride copolymer compns. contg., extrudable)
 IT **25038-72-6**, Methyl **acrylate**-vinylidene chloride
 copolymer **25101-06-8**, Ethyl **acrylate**-vinylidene
 chloride copolymer
 RL: USES (Uses)
 (polyethylene blends, extrudable without discoloration)
 RN 25038-72-6 HCAPLUS
 CN 2-Propenoic acid, methyl ester, polymer with 1,1-dichloroethene (9CI) (CA
 INDEX NAME)

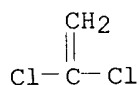
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CRN 96-33-3
 CMF C4 H6 O2



CM 2

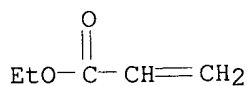
CRN 75-35-4
 CMF C2 H2 Cl2



RN 25101-06-8 HCAPLUS
 CN 2-Propenoic acid, ethyl ester, polymer with 1,1-dichloroethene (9CI) (CA
 INDEX NAME)

CM 1

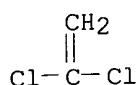
CRN 140-88-5
 CMF C5 H8 O2



CM 2

CRN 75-35-4
 CMF C2 H2 Cl2

KATHLEEN FULLER EIC 1700 308-4290



L46 ANSWER 31 OF 52 HCAPLUS COPYRIGHT 2001 ACS
 AN 1989:635155 HCAPLUS
 DN 111:235155
 TI Lubricating coating compositions for metals
 IN Sato, Toshiaki
 PA Toyo Ink Mfg. Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese
 IC ICM C09D005-00
 ICS C09D003-393; C09D005-00
 CC 42-5 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 55, 56

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 01081865	A2	19890328	JP 1987-239787	19870924
AB	Title compns. with good adhesion contain reaction products of carboxy- or OH-contg. natural or polyolefin waxes and carboxy- or OH-reactive resins as migration-resistant lubricants . An 80:20 mixt. of Olester Q 171 (acrylic resin; OH no. 45; 50% solids) and Hiwax 2203 A (acid no. 30) was heated 7 h at 140.degree. and dild. with xylene to give a dispersion (20% solids) which was mixed (1 part) with Almatex P 646 80, Cymel 350 20, and p-MeC6H4SO3H 1 part. The mixt. was coated on Al and baked 10 min at 170.degree. to give a coating with kinetic friction coeff. 0.11 initially and 0.12 after 30 min in boiling water and no change during wiping, vs. 0.10, 0.25, and removal of wax particles, resp., with Neptune 1 (polyethylene wax) as the lubricant.				
ST	polyolefin deriv lubricant coating; hydroxy wax deriv lubricant coating; carboxy wax deriv lubricant coating; acrylic wax lubricant coating; migration resistance lubricant coating; metal coating lubricant wax				
IT	Coating materials (lubricants in, polymer-wax reaction products as, for metals)				
IT	Lubricants (polymer-wax reaction products, in coatings for metals)				
IT	Carnauba wax Montan wax Waxes and Waxy substances RL: USES (Uses) (reaction products with polymers, as lubricants in coatings)				
IT	7429-90-5, Aluminum, uses and miscellaneous RL: USES (Uses) (coatings for, waxy lubricants for use in)				
IT	113054-98-1 123924-84-5 RL: TEM (Technical or engineered material use); USES (Uses) (coatings, contg. waxy lubricants, for metals)				
IT	9002-88-4D, Polyethylene, oxidized, reaction products with polymers. 9003-08-1D, reaction products with waxes 9010-77-9D, Acrylic acid-ethylene copolymer, reaction products with polymers 25053-53-6D, Ethylene-methacrylic acid copolymer, reaction products with polymers 25068-38-6D, reaction products with waxes 70777-48-9D, Hiwax 2203A, reaction products with polymers 123759-57-9D, Olester Q 171, reaction products with waxes 123759-58-0D,				

KATHLEEN FULLER EIC 1700 308-4290

Olester Q 173, reaction products with waxes

RL: USES (Uses)

(lubricants, migration-resistant, in coatings for metals)

IT 7429-90-5, Aluminum, uses and miscellaneous

RL: USES (Uses)

(coatings for, waxy lubricants for use in)

RN 7429-90-5 HCAPLUS

CN Aluminum (8CI, 9CI) (CA INDEX NAME)

Al

IT 9010-77-9D, Acrylic acid-ethylene copolymer, reaction products with polymers 25053-53-6D, Ethylene-methacrylic acid copolymer, reaction products with polymers

RL: USES (Uses)

(lubricants, migration-resistant, in coatings for metals)

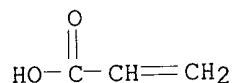
RN 9010-77-9 HCAPLUS

CN 2-Propenoic acid, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7

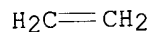
CMF C3 H4 O2



CM 2

CRN 74-85-1

CMF C2 H4



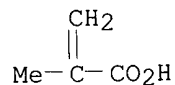
RN 25053-53-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 79-41-4

CMF C4 H6 O2



CM 2

CRN 74-85-1

CMF C2 H4

H₂C=CH₂

L46 ANSWER 32 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1989:500170 HCAPLUS

DN 111:100170

TI Lubricant and method for prevention of noise, produced by **friction**
between metal surfaces

IN Lanini, Marco; Scheiwiller, Elmar; Periard, Jacques

PA Lonza A.-G., Switz.

SO Patentschrift (Switz.), 4 pp.

CODEN: SWXXAS

DT Patent

LA German

IC ICM C10M111-04

ICS E01B019-00; B61K003-00

CC 51-8 (Fossil **Fuels**, Derivatives, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CH 669207	A	19890228	CH 1986-3029	19860729
AB	Lubricant compn. in solid plastic form for prevention of noise generated by friction of metal surfaces, esp. produced by rolling wheels of rail cars, contains a thermoplastic polymer, lubricant for plastics and solid lubricant . An example of the compn. contains graphite 70, Epolene C10 (polyethylene) 10, KW resin 20 B1/85 (hydrocarbon resin) 10, and PiB3 (polyisobutylene) 10%.				
ST	lubricant noise prevention thermoplastic polymer; polyethylene hydrocarbon resin noise lubricant; polyisobutylene graphite noise prevention lubricant				
IT	Lubricants (contg. thermoplastic polymers, for prevention of noise generation by friction of metal surfaces)				
IT	Clays, uses and miscellaneous Coumarone-indene resins Fatty acids, uses and miscellaneous Siloxanes and Silicones, uses and miscellaneous Soaps Waxes and Waxy substances RL: USES (Uses) (lubricants contg., for prevention of noise generation, by friction of metal surfaces)				
IT	Acrylic fibers, uses and miscellaneous Glass fibers, uses and miscellaneous Polyamide fibers, uses and miscellaneous Polyester fibers, uses and miscellaneous Polypropene fibers, uses and miscellaneous Titanates RL: USES (Uses) (surface modifying agent, lubricants contg., for prevention of noise generation, by friction of metal surfaces)				
IT	Alcohols, uses and miscellaneous Amides, uses and miscellaneous RL: USES (Uses) (fatty, lubricants contg., for prevention of noise generation, by friction of metal surfaces)				
IT	Hydrocarbons, uses and miscellaneous RL: USES (Uses) (fluoro, surface modifying agent, lubricants contg., for prevention of noise generation, by friction of metal surfaces)				
IT	Rubber, synthetic RL: USES (Uses)				

KATHLEEN FULLER EIC 1700 308-4290

- (isoprene-styrene, block, lubricants contg., for prevention of noise generation, by **friction** of metal surfaces)
- IT Wheels
(railway car, noise generation by, prevention of, lubricants for)
- IT Hydrocarbons, polymers
RL: USES (Uses)
(resins, lubricants contg., for prevention of noise generation, by **friction** of metal surfaces)
- IT 557-05-1, Zinc stearate 37220-82-9, Olein
RL: USES (Uses)
(lubricants contg., for prevention of noise between metal surfaces)
- IT 7782-42-5, Graphite, uses and miscellaneous 9002-88-4, Epolene C10
9003-27-4, Polyisobutylene
RL: USES (Uses)
(lubricants contg., for prevention of noise generation between metal surfaces)
- IT 557-04-0, Magnesium stearate 1241-94-7, Santicizer 141 9002-88-4,
Polyethylene 9014-93-1, Antarox DM970 24938-04-3, Vitel PE200
25038-32-8, Isoprene-styrene copolymer
RL: USES (Uses)
(lubricants contg., for prevention of noise generation, by **friction** of metal surfaces)
- IT 7789-75-5P, Calcium fluoride, uses and miscellaneous 7803-62-5P, Silane,
uses and miscellaneous 9002-84-0P
RL: PREP (Preparation); USES (Uses)
(surface modifying agent, lubricants contg., for prevention of noise generation, by **friction** of metal surfaces)

L46 ANSWER 33 OF 52 HCAPLUS COPYRIGHT 2001 ACS
AN 1989:460838 HCAPLUS
DN 111:60838
TI **Solid lubricant composition**
IN Jamison, Warren E.
PA Durafilm Materials Corp., USA
SO Brit. UK Pat. Appl., 28 pp.
CODEN: BAXXDU
DT Patent
LA English
IC ICM C10M125-24
ICS B05D005-08; C10M137-06; C10M137-10
CC 51-8 (Fossil **Fuels**, Derivatives, and Related Products)
FAN.CNT 3

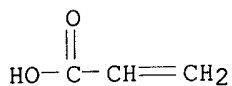
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2207146	A1	19890125	GB 1987-19003	19870811
	GB 2207146	B2	19910724		
	AU 8777108	A1	19890112	AU 1987-77108	19870817
	AU 599690	B2	19900726		
	CA 1296316	A1	19920225	CA 1987-544657	19870817
	JP 01031893	A2	19890202	JP 1987-226763	19870911
PRAI	US 1987-72097		19870710		

AB A **solid lubricant** useful for lubricating the flanges of railcar wheels and rails and for other similar applications contains a polymeric carrier 16-25, a lubricating **oil** 49-63, solid lubricating powder 10-16, and a surface active agent comprising a metallic dithiophosphate and an org. Mo compd. 6-16 wt.%. The **solid lubricant** is mixed and introduced into a screw type extruder wherein it is heated and extruded through a die into a **water** bath, forming an elastic rod or strand. The lubricant is applied to a surface to be lubricated by rubbing it onto the surface in a thin film. The surface active agent enhances the attachment and embedment of the dry lubricating powder into the surface. The lubricant serves to reduce both wear and **friction** between contacting surfaces. A preferred solid lubricating compn. contains fine Cu powder 5, fine Pb powder 5,

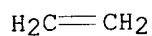
KATHLEEN FULLER EIC 1700 308-4290

mineral oil (motor oil, SAE 30) 49, ultrahigh mol. wt.
polyethylene powder 25, and liq. surfactant (additive ULC) 16 wt.%.
ST **solid lubricant** railcar wheel flange; copper lead
powder **solid lubricant**; polyethylene **solid**
lubricant surfactant wheel
IT Urethane polymers, uses and miscellaneous
RL: USES (Uses)
(carriers, **solid lubricants** contg., for railcar
wheel flanges)
IT Lubricating **oils**
(for railcar wheel flanges)
IT Ionomers
RL: USES (Uses)
(metallic for railcar wheel flanges)
IT Naphthenic acids, compounds
RL: USES (Uses)
(lead salts, surfactants contg., for railcar wheel flanges)
IT Lubricants
(solid, polymeric carrier-lubricating oil-solid
powder-surfactant, for railcar wheel flanges)
IT **Oils**, glyceridic
RL: USES (Uses)
(sperm, surfactants contg., for railcar wheel flanges)
IT Fats, compounds
RL: USES (Uses)
(sulfurized, surfactants contg., for railcar wheel flanges)
IT **Oils**, glyceridic
RL: USES (Uses)
(vegetable, for railcar wheel flanges)
IT 74-85-1D, Ethene, polymers 9002-88-4, Polyethylene 9003-07-0,
Polypropylene
RL: USES (Uses)
(carriers, **solid lubricants** contg., for railcar
wheel flanges)
IT 9010-77-9, **Acrylic** acid-ethylene copolymer 24937-78-8,
Ethylene-vinyl acetate copolymer 26445-96-5 28516-43-0
, Surlyn 9970 100932-50-1, Molyvan L 121382-19-2, Spenkel M 21-40X
121844-47-1 121890-85-5
RL: USES (Uses)
(for railcar wheel flanges)
IT 1317-33-5, Molybdenum sulfide, uses and miscellaneous
7439-92-1, Lead, uses and miscellaneous 7782-42-5,
Graphite, uses and miscellaneous 11109-57-2 11143-56-9 11146-05-7
12713-30-3 12735-96-5 37230-21-0
RL: USES (Uses)
(powder, for railcar wheel flanges)
IT 7440-50-8, Copper, uses and miscellaneous
RL: USES (Uses)
(powder, **solid lubricants** contg., for railcar wheel
flanges)
IT 7439-98-7D, Molybdenum, compds. 15834-33-0D, Phosphorodithioic acid,
zinc salts
RL: USES (Uses)
(surfactants contg., for railcar wheel flanges)
IT 121382-03-4, Heveanol H 1501
RL: USES (Uses)
(tackifiers, for railcar wheel flanges)
IT 9010-77-9, **Acrylic** acid-ethylene copolymer
26445-96-5 28516-43-0, Surlyn 9970
RL: USES (Uses)
(for railcar wheel flanges)
RN 9010-77-9 HCAPLUS
CN 2-Propenoic acid, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7
CMF C3 H4 O2

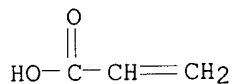
CM 2

CRN 74-85-1
CMF C2 H4RN 26445-96-5 HCAPLUS
CN 2-Propenoic acid, polymer with ethene, calcium salt (9CI) (CA INDEX NAME)

CM 1

CRN 9010-77-9
CMF (C3 H4 O2 . C2 H4)x
CCI PMS

CM 2

CRN 79-10-7
CMF C3 H4 O2

CM 3

CRN 74-85-1
CMF C2 H4RN 28516-43-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with ethene, zinc salt (9CI) (CA INDEX NAME)

CM 1

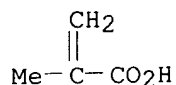
CRN 25053-53-6
CMF (C4 H6 O2 . C2 H4)x
CCI PMS

CM 2

CRN 79-41-4

KATHLEEN FULLER EIC 1700 308-4290

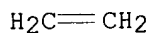
CMF C4 H6 O2



CM 3

CRN 74-85-1

CMF C2 H4



IT 1317-33-5, Molybdenum sulfide, uses and miscellaneous
 7439-92-1, Lead, uses and miscellaneous 7782-42-5,
 Graphite, uses and miscellaneous
 RL: USES (Uses)
 (powder, for railcar wheel flanges)
 RN 1317-33-5 HCAPLUS
 CN Molybdenum sulfide (MoS2) (8CI, 9CI) (CA INDEX NAME)



RN 7439-92-1 HCAPLUS
 CN Lead (8CI, 9CI) (CA INDEX NAME)

Pb

RN 7782-42-5 HCAPLUS
 CN Graphite (8CI, 9CI) (CA INDEX NAME)

C

IT 7440-50-8, Copper, uses and miscellaneous
 RL: USES (Uses)
 (powder, **solid lubricants** contg., for railcar wheel
 flanges)
 RN 7440-50-8 HCAPLUS
 CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

L46 ANSWER 34 OF 52 HCAPLUS COPYRIGHT 2001 ACS
 AN 1988:513265 HCAPLUS
 DN 109:113265
 TI **Solid lubricant coating compositions**
 IN Kato, Akihiro; Ito, Haruki; Maeda, Kenzo; Kawakubo, Fumio
 PA Nippon Oils and Fats Co., Ltd., Japan; Sumiko Junkatsuzai Co., Ltd.
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF

KATHLEEN FULLER EIC 1700 308-4290

DT Patent
 LA Japanese
 IC ICM C09D005-00
 ICS C09D005-00
 CC 51-8 (Fossil **Fuels**, Derivatives, and Related Products)
 Section cross-reference(s): 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63086764	A2	19880418	JP 1986-232710	19860930
AB	Title compns. useful for metals contain 20-95% solid thermosetting resins and 5-80% solid lubricants . Thus, Almatex PD 7210 (an acrylic resin, m.p. 90.degree.) 79.2, Fluon L 169 (m.p. 320.degree.) 8.0, Raven 420 2.0, dodecanedioic acid (m.p. 130.degree.) 10.4, and Epikote 1002 (m.p. 83.degree.) 2.4 wt. parts were dry blended, melt kneaded, and pulverized to give a powd. coating compn. A Zn ₃ (PO ₄) ₂ -treated steel plate was spray coated with the compn. and baked at 190.degree. for 20 min to give a test piece with good appearance, a cross-cut adhesion of 100/100, an impact strength (JIS K 5400) of 50 cm, a max. coating thickness of 930 .mu.m, and an av. friction coeff. of 0.104, vs. 100/100, 50, 500, and 0.306, resp., for the coating prep. from a similar compn. contg. 3.0% solid lubricant . ST solid lubricant coating steel; thermosetting resin coating steel lubricating IT Mica-group minerals, uses and miscellaneous Soaps RL: USES (Uses) (solid lubricants, thermosetting resin coatings contg., for steel) IT Lubricants (solid, coatings of, on steel) IT 27754-24-1, Dicyandiamide-Epikote 1004 copolymer 116087-26-4, B 1065-Epikote 1004-ER 6610 copolymer 116188-84-2, Almatex PD 7210-dodecanedioic acid-Epikote 1002 copolymer RL: USES (Uses) (coatings, contg. solid lubricants , for steel) IT 12597-69-2 RL: USES (Uses) (lubricants, solid, coatings of, on steel) IT 7782-42-5, Graphite, uses and miscellaneous RL: USES (Uses) (solid lubricants, CPF 6, thermosetting resin coatings contg., for steel) IT 1317-33-5, Molybdenum disulfide, uses and miscellaneous RL: USES (Uses) (solid lubricants, Moly Powder PA, thermosetting resin coatings contg., for steel) IT 637-12-7 9002-84-0, Fluon L 169 10043-11-5, Boron nitride, uses and miscellaneous 11113-63-6, Fluorographite 12138-09-9, Tungsten disulfide RL: USES (Uses) (solid lubricants, thermosetting resin coatings contg., for steel)				
L46	ANSWER 35 OF 52 HCAPLUS COPYRIGHT 2001 ACS				
AN	1988:495848 HCAPLUS				
DN	109:95848				
TI	Lubricant compositions containing borated overbased organic acid salt and friction modifier.				
IN	Schwind, James Jay; Tipton, Craig Daniel				
PA	Lubrizol Corp., USA				
SO	PCT Int. Appl., 47 pp. CODEN: PIXXD2				

KATHLEEN FULLER EIC 1700 308-4290

DT Patent
 LA English
 IC ICM C10M141-12
 ICS C10M163-00; C10M169-04
 ICI C10M141-12, C10M101-04, C10M107-02, C10M129-76, C10M133-04, C10M133-08, C10M133-18, C10M135-02, C10M135-04, C10M137-10, C10M137-12, C10M139-00, C10M155-00, C10M159-20, C10M159-22, C10M159-24; C10M169-04
 CC 51-8 (Fossil Fuels, Derivatives, and Related Products)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8804684	A1	19880630	WO 1987-US3340	19871215
	W: AU, BR, DK, FI, JP, NO				
	RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	US 4792410	A	19881220	US 1986-946407	19861222
	IN 170459	A	19920328	IN 1987-DE816	19870917
	AU 8810886	A1	19880715	AU 1988-10886	19871215
	AU 600791	B2	19900823		
	EP 294458	A1	19881214	EP 1988-900646	19871215
	EP 294458	B1	19910821		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	JP 01501801	T2	19890622	JP 1988-500802	19871215
	JP 2532638	B2	19960911		
	BR 8707586	A	19891003	BR 1987-7586	19871215
	AT 66487	E	19910915	AT 1988-900646	19871215
	IL 84828	A1	19911121	IL 1987-84828	19871215
	JP 2532638	B2	19960911	JP 1987-500802	19871215
	ZA 8709517	A	19880831	ZA 1987-9517	19871218
	ES 2008392	A6	19890716	ES 1987-3646	19871218
	CA 1295318	A1	19920204	CA 1987-554828	19871218
	NO 8803652	A	19880816	NO 1988-3652	19880816
	NO 174429	B	19940124		
	NO 174429	C	19940504		
	DK 8804627	A	19880818	DK 1988-4627	19880818
	FI 8803860	A	19880819	FI 1988-3860	19880819
PRAI	US 1986-946407		19861222		
	EP 1988-900646		19871215		
	WO 1987-US3340		19871215		

OS MARPAT 109:95848

AB A lubricant mixt. suitable for a manual transmission fluid comprises (a) a borated overbased alkali metal or alk. earth metal salt selected from sulfonates, phenates, oxyates, carboxylates, and their mixts., (b) a **friction** modifier selected from fatty phosphites, fatty acid amides, borated fatty epoxides, fatty amines, glycerol esters and their borated derivs., borated alkoxyated fatty amines, sulfurized olefins, and their mixts., and (c) an oil of lubricating viscosity. The fluid is esp. useful in reducing double detent and clashing during manual transmission shifting. Thus, a manual transmission fluid was prep'd. by combining mineral oil 56.5, polyisobutylene (av. mol. wt. .apprx.1700) 20, C12(av.) alkylated benzene 15, maleic anhydride-styrene copolymer esterified as a pour point depressant 1, Zn dithiophosphate 2.38, diolelyphosphite 0.75, sulfurized olefin 1, fatty acid amide 0.25, seal swell agent 0.3, borated Na carbonate-overbased Na alkylbenzenesulfonate 3.75, polyisobutenylsuccinic anhydride-ethoxylated amine reaction products 0.31 parts, and polydimethyl siloxane 100 ppm; the product had a high dynamic coeff. of **friction** and a low static coeff. of **friction**.

ST transmission fluid manual compn; borated overbased alkylbenzenesulfonate transmission fluid; **friction** modifier manual transmission fluid; lubricant transmission fluid manual

IT Epoxides

RL: USES (Uses)

(borated C16-fatty, manual transmission fluids contg.)

IT Siloxanes and Silicones, uses and miscellaneous

KATHLEEN FULLER EIC 1700 308-4290

RL: USES (Uses)
 (di-Me, **foam inhibitor**, manual transmission fluids
 contg.)

IT Amines, compounds
 RL: USES (Uses)
 (ethoxylated, manual transmission fluids contg.)

IT Amides, uses and miscellaneous
 RL: USES (Uses)
 (fatty, manual transmission fluids contg.)

IT Alkenes, compounds
 RL: USES (Uses)
 (sulfurized, manual transmission fluids contg.)

IT 71-43-2D, Benzene, alkylated 98-11-3D, Benzenesulfonic acid, alkyl
 derivs., salts, (overbased, borated) 108-30-5D, Succinic anhydride,
 polyisobutenyl derivs., reaction products with ethoxylated amine
 108-95-2D, Phenol, C12-alkyl derivs., sulfur coupled, calcium salts,
 overbased 301-02-0, Oleyl amide 19210-06-1, Zinc dithiophosphate
 25088-57-7, Dioleoyl phosphite 25189-70-2, 1-Decene polymer 25496-72-4
 25496-72-4D, borated
 RL: USES (Uses)
 (manual transmission fluids contg.)

IT 9011-13-6D, esterified
 RL: USES (Uses)
 (pour point depressant, manual transmission fluids contg.)

IT 9003-27-4, Polyisobutylene **25087-26-7**
 RL: USES (Uses)
 (viscosity improver, manual transmission fluids contg.)

IT **25087-26-7**
 RL: USES (Uses)
 (viscosity improver, manual transmission fluids contg.)

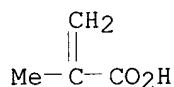
RN 25087-26-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 79-41-4

CMF C4 H6 O2



L46 ANSWER 36 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1988:168985 HCAPLUS

DN 108:168985

TI Manufacture of thermoplastic-rubber polymer alloys

IN Orndorff, Roy Lee, Jr.

PA Goodrich, B. F., Co., USA

SO Eur. Pat. Appl., 16 pp.
 CODEN: EPXXDW

DT Patent

LA English

IC ICM C08L021-00
 ICS C08L023-06; F16C033-22

CC 39-9 (Synthetic Elastomers and Natural Rubber)
 Section cross-reference(s): 37

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	EP 254307	A1	19880127	EP 1987-110656	19870723
	EP 254307	B1	19911227		

KATHLEEN FULLER EIC 1700 308-4290

R: DE, FR, GB

US 4735982	A	19880405	US 1986-889541	19860725
CA 1308842	A1	19921013	CA 1987-543008	19870724
JP 63099266	A2	19880430	JP 1987-184703	19870725

PRAI US 1986-889541 19860725

AB Thermoplastic-thermoset rubber polymer alloys, having good wet and dry **friction** and wear resistance, and useful for hard bearings, are manufd. by dry blending the thermoplastic compd. with ground thermoset rubber and a **lubricant**, heating and mixing the **compn.** to above the glass temp. of the thermoplastic compd., and subsequently cooling under **pressure**. Hostalen GUR 321.48, ground nitrile rubber vulcanizate 117.9, and graphite powder (grade 117-A) 87.2 g were mixed and compression molded at 350.degree. F in 667 psi **pressure** for 1 h to give a polymer alloy (0.720 in thick). The alloy was used in the std. cutless bearing wet wear test at 20 rpm showing wear rate 0.0045 .times. 10⁻⁴ g/h, compared with 1,897 .times. 10⁻⁴ g/h for Thordon XL.

ST nitrile rubber thermoplastic alloy; polyethylene rubber alloy wear resistance; graphite lubricant thermoplastic alloy; bearing thermoplastic rubber alloy

IT Rubber, butyl, uses and miscellaneous
 Rubber, nitrile, uses and miscellaneous
 RL: USES (Uses)
 (alloy with thermoplastic, lubricant-contg., wear-resistant, for bearings)

IT Lubricants
 (graphite and molybdenum disulfide and silicones, for thermoplastic-thermoset rubber alloys)

IT Siloxanes and Silicones, uses and miscellaneous
 RL: USES (Uses)
 (oil, lubricants, for thermoplastic-thermoset rubber alloys)

IT Glass fibers, uses and miscellaneous
 RL: USES (Uses)
 (short, thermoplastic-thermoset alloy reinforced by, wear-resistant, for bearings)

IT Bearings
 (thermoplastic-thermoset rubber alloy for, wear-resistant)

IT Abrasion-resistant materials
 (thermoplastic-thermoset rubber alloys for, lubricant-contg.)

IT Rubber, synthetic
 RL: USES (Uses)
 (EPDM, alloy with thermoplastic, lubricant-contg., wear-resistant, for bearings)

IT Polyamide fibers, uses and miscellaneous
 RL: USES (Uses)
 (aramid, short, thermoplastic-thermoset alloy reinforced by, wear-resistant, for bearings)

IT Synthetic fibers, polymeric
 RL: USES (Uses)
 (fluoropolymers, short, thermoplastic-thermoset alloy reinforced by, wear-resistant, for bearings)

IT Rubber, synthetic
 RL: USES (Uses)
 (hexafluoropropene-vinylidene fluoride, alloy with thermoplastic, lubricant-contg., wear-resistant, for bearings)

IT Plastics
 RL: USES (Uses)
 (thermo-, alloys with rubber vulcanizate, lubricant-contg., wear-resistant)

IT 9002-88-4
 RL: USES (Uses)
 (alloys with nitrile rubber vulcanizate, lubricant-contg., wear-resistant, for bearings)

IT **7782-42-5**, Graphite, uses and miscellaneous 23261-43-0
 RL: USES (Uses)

(lubricants, for thermoplastic-thermoset rubber alloys, wear-resistant)

IT 74-85-1
 RL: USES (Uses)
 (rubber, EPDM, alloy with thermoplastic, lubricant-contg., wear-resistant, for bearings)

IT 9003-18-3 9010-85-9
 RL: USES (Uses)
 (rubber, alloy with thermoplastic, lubricant-contg., wear-resistant, for bearings)

IT 9011-17-0, Hexafluoropropene-vinylidene fluoride copolymer
 RL: USES (Uses)
 (rubber, alloys with thermoplastic, lubricant-contg., wear-resistant, for bearings)

IT 7782-42-5, Graphite, uses and miscellaneous
 RL: USES (Uses)
 (lubricants, for thermoplastic-thermoset rubber alloys, wear-resistant).

RN 7782-42-5 HCAPLUS
 CN Graphite (8CI, 9CI) (CA INDEX NAME)

C

IT 9003-18-3
 RL: USES (Uses)
 (rubber, alloy with thermoplastic, lubricant-contg., wear-resistant, for bearings)

RN 9003-18-3 HCAPLUS
 CN 2-Propenenitrile, polymer with 1,3-butadiene (9CI) (CA INDEX NAME)

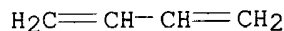
CM 1

CRN 107-13-1
 CMF C3 H3 N



CM 2

CRN 106-99-0
 CMF C4 H6



L46 ANSWER 37 OF 52 HCAPLUS COPYRIGHT 2001 ACS
 AN 1987:639650 HCAPLUS
 DN 107:239650
 TI Lubricating compositions for hot-drawing of seamless steel tubes
 IN Muto, Takashi; Okita, Satoru; Kawaguchi, Tetsuto
 PA Nippon Steel Chemical Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese
 IC ICM C10M173-02
 ICI C10M173-02, C10M103-02, C10M103-00, C10M103-06, C10M107-34, C10M107-28, C10M107-24, C10M107-06; C10M173-02, C10M103-02, C10M103-06, C10M107-34, C10M107-28, C10M107-24, C10M107-06; C10N010-08, C10N010-12, C10N010-16,
 KATHLEEN FULLER EIC 1700 308-4290

C10N030-08

CC 51-8 (Fossil **Fuels**, Derivatives, and Related Products)
 Section cross-reference(s): 55

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62184096	A2	19870812	JP 1986-24168	19860207
	JP 07107157	B4	19951115		
AB	Title compns. comprise powd. graphite 45-90, lubricant components (e.g., BN) 3-30, and water-sol. or water -dispersible resins 7-35 parts. Thus, a mixt. of powd. graphite (av. size 10 .mu.m) 74.1, BN 3.7, polyethylene glycol (I) 11.1, and an acrylic acid-Me acrylate copolymer (II) 11.1 parts was dispersed in water contg. a surfactant and a defoaming agent, and sprayed on a SKD 61 specimen heated at 100.degree. to form a film 60 .mu. thick. The coated specimen brought into contact with a rotating specimen to be hot-drawn (heated to 1000.degree.) at 19.5 kg/mm2 and relative sliding speed 1.5 m/s showed an av. friction coeff. 0.015 at a contact time of 0-3 s vs. 0.042 with a lubricant compn. contg. BN 76.9, I 11.5, and II 11.6 parts.				
ST	lubricant graphite PEG resin metalworking; seamless steel hot drawing lubricant; boron nitride graphite resin lubricant; acrylic acid copolymer drawing lubricant; acrylate methyl copolymer drawing lubricant				
IT	Glass, oxide RL: TEM (Technical or engineered material use); USES (Uses) (lubricant contg., for hot drawing of seamless steel tubes)				
IT	Pipes and Tubes (steel, seamless, hot drawing of, lubricants for)				
IT	Lubricants (high-temp., metalworking, for hot drawing of seamless steel tubes)				
IT	1317-33-5, Molybdenum sulfide (MoS2), uses and miscellaneous 7782-42-5, Graphite, uses and miscellaneous 9002-89-5, Poly(vinyl alcohol) 9003-07-0, Polypropylene 10043-11-5, Boron nitride, uses and miscellaneous 11104-61-3, Cobalt oxide 12138-09-9, Tungsten sulfide (WS2) 13463-67-7, Titanium oxide (TiO2), uses and miscellaneous 25249-16-5 25302-81-2, Acrylic acid-methyl acrylate copolymer 25322-68-3, Polyethylene glycol RL: TEM (Technical or engineered material use); USES (Uses) (lubricant contg., for hot drawing of seamless steel tubes)				
IT	12597-69-2 RL: TEM (Technical or engineered material use); USES (Uses) (lubricants, high-temp., metalworking, for hot drawing of seamless steel tubes)				
IT	1317-33-5, Molybdenum sulfide (MoS2), uses and miscellaneous 7782-42-5, Graphite, uses and miscellaneous 10043-11-5, Boron nitride, uses and miscellaneous 12138-09-9, Tungsten sulfide (WS2) 25249-16-5 25302-81-2, Acrylic acid-methyl acrylate copolymer RL: TEM (Technical or engineered material use); USES (Uses) (lubricant contg., for hot drawing of seamless steel tubes)				
RN	1317-33-5 HCAPLUS				
CN	Molybdenum sulfide (MoS2) (8CI, 9CI) (CA INDEX NAME)				

S=Mo=S

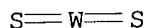
RN 7782-42-5 HCAPLUS
 CN Graphite (8CI, 9CI) (CA INDEX NAME)

C

RN 10043-11-5 HCAPLUS
 CN Boron nitride (BN) (8CI, 9CI) (CA INDEX NAME)



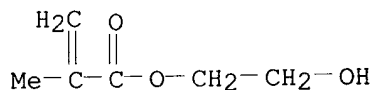
RN 12138-09-9 HCAPLUS
 CN Tungsten sulfide (WS2) (8CI, 9CI) (CA INDEX NAME)



RN 25249-16-5 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

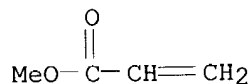
CRN 868-77-9
 CMF C6 H10 O3



RN 25302-81-2 HCAPLUS
 CN 2-Propenoic acid, polymer with methyl 2-propenoate (9CI) (CA INDEX NAME)

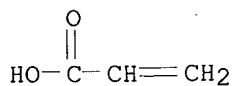
CM 1

CRN 96-33-3
 CMF C4 H6 O2



CM 2

CRN 79-10-7
 CMF C3 H4 O2



L46 ANSWER 38 OF 52 HCAPLUS COPYRIGHT 2001 ACS
 AN 1987:216833 HCAPLUS
 DN 106:216833

KATHLEEN FULLER EIC 1700 308-4290

TI Sulfur-containing **compositions**, and additive concentrates, lubricating **oils**, metal working **lubricants** and asphalt **compositions** containing same
 IN DiBiase, Stephen A.; Sowerby, Roger Lee; Higgins, William Albert
 PA Lubrizol Corp. , USA
 SO PCT Int. Appl., 97 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC C07C149-00; **C10M135-02**; C08K005-36
 CC 51-8 (Fossil **Fuels**, Derivatives, and Related Products)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8700833	A1	19870212	WO 1986-US1509	19860721
	W: AU, BR, JP				
	RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	US 4740322	A	19880426	US 1986-824490	19860131
	IN 168102	A	19910202	IN 1986-DE607	19860710
	ZA 8605342	A	19870325	ZA 1986-5342	19860717
	AU 8661480	A1	19870305	AU 1986-61480	19860721
	AU 598742	B2	19900705		
	EP 232327	A1	19870819	EP 1986-904701	19860721
	EP 232327	B1	19901003		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	BR 8606844	A	19871103	BR 1986-6844	19860721
	JP 63500718	T2	19880317	JP 1986-504054	19860721
	AT 57180	E	19901015	AT 1986-904701	19860721
	ES 2001485	A6	19880601	ES 1986-656	19860728
	CA 1259305	A1	19890912	CA 1986-514774	19860728
	CA 1267131	A1	19900327	CA 1986-514773	19860728
	ES 2007182	A6	19890601	ES 1988-1045	19880406
PRAI	US 1985-760186		19850729		
	US 1986-824490		19860131		
	EP 1986-904701		19860721		
	WO 1986-US1509		19860721		

AB S-contg. **compns.**, useful as general purpose **antioxidants** and **friction** modifiers for lubricating **compns.** and automatic transmission fluids and as additives, esp., in metalworking **lubricants**, are prepd. by sulfurizing (1) >1 fatty acid ester of a polyhydric alc., or (2) >1 fatty acid or fatty acid ester of a monohydric alc., or its mixt., or (3) >1 other olefin, or (4) .gtoreq.2 mixts. of (1), (2), and (3) in the presence of a catalytic amt. of (5) >1 dithiocarbamate salt of general formula R1R2NC(:S)SH (R1 and R2 are independent hydrocarbyl, or (6) >1 mercaptobenzothiazole, or (7) mixts. of (5) and (6). Suitable **compns.** to be sulfurized include Diels-Alder adducts of (meth)**acrylate** esters with butadiene or isoprene. The above-described sulfurized **compns.** as well as sulfurized **compns.** prepd. in the absence of catalysts (5) and/or (6) are also useful in asphalt **compns.**, esp. asphalt cement. Thus, a metalworking lubricating **oil** contained 95 wt. parts mineral **oil** and 5 wt. parts sulfurized **compn.** (prepd. by sulfuration of C15-18-.alpha.-olefins in the presence of Zn diamyldithiocarbamate).

ST metalworking lubricant **antioxidant friction** modifier; lubricating **oil** additive sulfurized **compn**; fatty acid ester sulfuration lubricant; olefin sulfurized lubricating **oil** additive; Diels Alder adduct sulfurized lubricant additive; zinc dithiocarbamate catalyst lubricant sulfuration; mercaptobenzothiazole sulfuration catalyst lubricant additive; asphalt cement additive sulfurized **compn**; **acrylate** sulfurized lubricating **oil** additive; **methacrylate** sulfurized lubricating **oil** additive

IT Lubricating **oil** additives

(**antioxidants-friction** modifiers, sulfurized fatty
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- acids (or esters) and/or olefins)
- IT Pavements and Roads
(asphalt concrete, prepn. of, stabilizing additives for, contg. sulfurized fatty acids (or esters) or olefins)
- IT Soybean oil
RL: USES (Uses)
(mixts. with alkenes, sulfurized, additives, for metalworking lubricants and/or asphalt)
- IT Cottonseed oil
Lard
Peanut oil
RL: USES (Uses)
(mixts. with alkenes, sulfurized, asphalt stabilizing additives)
- IT Lecithins
RL: USES (Uses)
(mixts. with soybean oil, tall-oil acids, and C15-18-.alpha.-olefins, sulfurized, additives, for metalworking lubricants and asphalt)
- IT Diels-Alder reaction
(of (meth)acrylate esters, products from, sulfurized, additives, for metalworking lubricants and asphalt)
- IT Sulfuration catalysts
(of fatty acids(s) (or esters) and/or olefins, in manuf. of lubricant and/or asphalt additives)
- IT Asphalt
RL: USES (Uses)
(stability improvers for, sulfurized fatty acids (or esters) and/or olefins)
- IT Sunflower oil
RL: USES (Uses)
(sulfurized, additives, for metalworking lubricants and/or asphalt)
- IT Fatty acids, esters
RL: USES (Uses)
(esters, sulfurized, additives, for metalworking lubricants and/or asphalt)
- IT Lubricants
(metalworking, contg. sulfurized fatty acids (or esters) and/or olefins)
- IT Glycerides, compounds
RL: USES (Uses)
(mixts., with alkenes, sulfurized, asphalt-stabilizing additives)
- IT Oils, essential
RL: USES (Uses)
(pine, mixts. with alkenes, sulfurized, additives, for metalworking lubricants and/or asphalt)
- IT Fatty acids, compounds
RL: USES (Uses)
(tall-oil, sulfurized, additives, for metalworking lubricants and/or asphalt)
- IT 28805-52-9 38094-73-4 38094-74-5 59321-72-1 71902-20-0
RL: USES (Uses)
(additive, for metalworking lubricants and asphalt)
- IT 78-79-5D, Diels-Alder adducts with alkyl (meth)acrylates, sulfurized 79-10-7D, alkyl esters, Diels-Alder adducts with isoprene, sulfurized 79-41-4D, alkyl esters, Diels-Alder adducts with isoprene, sulfurized 6493-77-2D, sulfurized 37981-14-9D, sulfurized 38097-78-8D, sulfurized
RL: USES (Uses)
(additives, for metalworking lubricants and asphalt)
- IT 98-83-9D, .alpha.-Methylstyrene, sulfurized 106-98-9D, mixt. with alkenes, sulfurized 110-83-8D, Cyclohexene, sulfurized 112-62-9D, Methyl oleate, sulfurized 592-41-6D, 1-Hexene, mixt. with alkenes, sulfurized 872-05-9D, 1-Decene, isomerized, sulfurized 1330-61-6D, Isodecyl acrylate, sulfurized 7756-94-7D, sulfurized

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- 9003-27-4D, Polyisobutene, sulfurized 25167-70-8D, Diisobutene, sulfurized
 RL: USES (Uses)
 (additives, for metalworking lubricants and/or asphalt)
- IT 101-02-0
 RL: USES (Uses)
 (mixts. with C15-18-.alpha.-olefins and soybean oil, sulfurized, additives, for metalworking lubricants and asphalt)
- IT 112-80-1, Oleic acid, uses and miscellaneous
 RL: USES (Uses)
 (mixts. with alkenes and soybean oil, sulfurized, metalworking lubricant additives)
- IT 111-66-0 115-11-7, uses and miscellaneous
 RL: USES (Uses)
 (mixts. with alkenes, sulfurized, additives, for metalworking lubricants and/or asphalt)
- IT 115-11-7D, polymers
 RL: USES (Uses)
 (mixts. with soybean oil and tall-oil acids, sulfurized, additives, for metalworking lubricants and asphalt)
- IT 629-73-2
 RL: USES (Uses)
 (mixts. with soybean oil, sulfurized, asphalt stabilizing additives)
- IT 149-30-4 13927-71-4 15337-18-5, Zinc diamyldithiocarbamate
 RL: CAT (Catalyst use); USES (Uses)
 (sulfuration catalyst, for fatty acid (esters) and/or olefins, in manuf. of metalworking lubricant and/or asphalt additives)
- IT 7704-34-9, Sulfur, uses and miscellaneous
 RL: USES (Uses)
 (sulfurizing agent, for fatty acids (esters) and/or olefins, in manuf. of lubricant and/or asphalt additives)

L46 ANSWER 39 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1987:159364 HCAPLUS

DN 106:159364

TI Cold-rolling lubricant compositions

IN Muto, Toshimi; Muraki, Kazuyuki

PA Yushiro Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C10M149-04

ICS C10M149-06

ICI C10N030-04, C10N030-06, C10N040-24

CC 51-8 (Fossil Fuels, Derivatives, and Related Products)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62011799	A2	19870120	JP 1985-149886	19850710
AB	Dispersants for cold-rolling lubricant concs. (contg. fats, fatty esters, and/or mineral oils) consist of polymers of a vinyl compd. and an unsatd. aminoalkyl ester or amide of formula $\text{CH}_2:\text{CR}_1\text{COA}(\text{CH}_2)_n\text{NR}_2\text{R}_3$ or $\text{CH}_2:\text{CR}_1\text{CO}_2\text{CH}_2\text{CH}(\text{OH})\text{CH}_2\text{NR}_2\text{R}_3$ (A = O or NH, R1 = H or Me; R2, R3 = C1-3-alkyl; n = 1-3). Thus, 99 parts machine oil was mixed with 1 part dispersant mixt. consisting of a 9:1 (mol ratio units) diethylaminoethyl methacrylate phosphate-styrene copolymer. The lubricant mixt. conc. was dild. to 2 wt.% with water. The max. load for an extreme-pressure test and friction coeff. were 10.5 kg/cm ² and 0.11, resp.				
ST	lubricant cold rolling aminoalkyl acrylate; vinyl copolymer cold rolling lubricant; dispersant cold rolling aq				

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lubricant; **methacrylate** aminoalkyl cold rolling lubricant

IT Lubricants
(copolymers of vinyl compds. with aminoalkyl **acrylates** or **methacrylates**)

IT Fats, uses and miscellaneous
RL: USES (Uses)
(lubricant concs. contg., **aq.**, for cold-rolling, polymer **dispersants** for)

IT Fatty acids, esters
RL: USES (Uses)
(esters, lubricant concs. contg., **aq.**, for cold-rolling, polymer **dispersants** for)

IT Vinyl compounds, polymers
RL: USES (Uses)
(polymers, with unsatd. aminoalkyl esters or amides, **dispersants**, for **aq.** cold-rolling lubricants)

IT 107719-59-5 107719-60-8 107719-61-9
107719-63-1 107719-65-3 107719-66-4
107719-68-6 107719-70-0 107720-32-1
107720-33-2 107720-38-7 107720-39-8
107748-54-9 107760-92-9 107783-91-5
RL: USES (Uses)
(**dispersant**, for **aq.** cold-rolling lubricants)

IT 107719-59-5 107719-60-8 107719-61-9
107719-63-1 107719-65-3 107719-66-4
107719-68-6 107719-70-0 107720-32-1
107720-33-2 107720-38-7 107720-39-8
107748-54-9 107760-92-9 107783-91-5
RL: USES (Uses)
(**dispersant**, for **aq.** cold-rolling lubricants)

RN 107719-59-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, phosphate, polymer with 3-(dimethylamino)-2-hydroxypropyl 2-methyl-2-propenoate phosphate (salt) and ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 100-42-5

CMF C8 H8

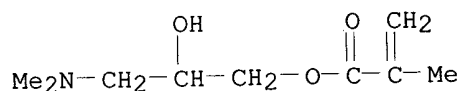
H₂C=CH-Ph

CM 2

CRN 95243-16-6
CMF C9 H17 N O3 . x H3 O4 P

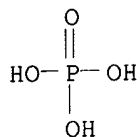
CM 3

CRN 37817-81-5
CMF C9 H17 N O3



CM 4

CRN 7664-38-2
CMF H3 O4 P

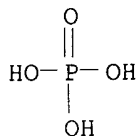


CM 5

CRN 95215-19-3
CMF C8 H15 N O2 . x H3 O4 P

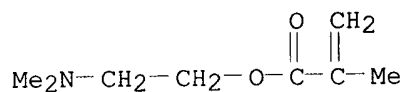
CM 6

CRN 7664-38-2
CMF H3 O4 P



CM 7

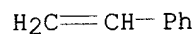
CRN 2867-47-2
CMF C8 H15 N O2



RN 107719-60-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-(diethylamino)ethyl ester, phosphate,
polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 100-42-5
CMF C8 H8



CM 2

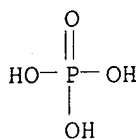
CRN 14480-03-6
CMF C10 H19 N O2 . x H3 O4 P

CM 3

CRN 7664-38-2

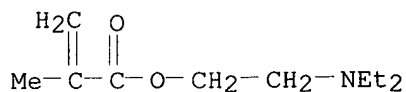
KATHLEEN FULLER EIC 1700 308-4290

CMF H3 O4 P



CM 4

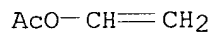
CRN 105-16-8
CMF C10 H19 N O2



RN 107719-61-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-(diethylamino)ethyl ester, phosphate,
polymer with ethenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 108-05-4
CMF C4 H6 O2

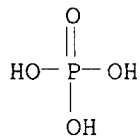


CM 2

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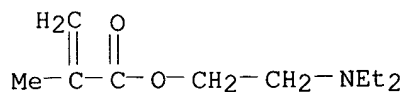
CM 3

CRN 7664-38-2
CMF H3 O4 P



CM 4

CRN 105-16-8
CMF C10 H19 N O2

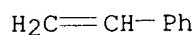


RN 107719-63-1 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, compd. with boric acid (H3BO3), polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 100-42-5

CMF C8 H8



CM 2

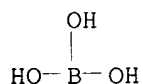
CRN 107719-62-0

CMF C8 H15 N O2 . x B H3 O3

CM 3

CRN 10043-35-3

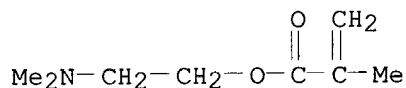
CMF B H3 O3



CM 4

CRN 2867-47-2

CMF C8 H15 N O2



RN 107719-65-3 HCAPLUS

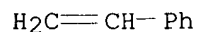
RN 107719-66-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(dimethylamino)-2-hydroxypropyl ester, phosphate (salt), polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 100-42-5

CMF C8 H8

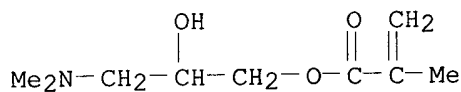


CM 2

CRN 95243-16-6
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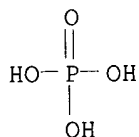
CM 3

CRN 37817-81-5
CMF C9 H17 N O3



CM 4

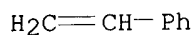
CRN 7664-38-2
CMF H3 O4 P



RN 107719-68-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(diethylamino)-2-hydroxypropyl ester, propanoate (salt), polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 100-42-5
CMF C8 H8

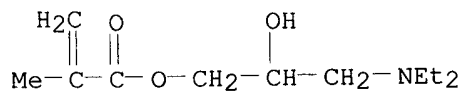


CM 2

CRN 107719-67-5
CMF C11 H21 N O3 . C3 H6 O2

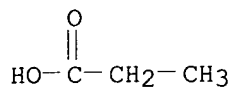
CM 3

CRN 21714-01-2
CMF C11 H21 N O3



CM 4

CRN 79-09-4
CMF C3 H6 O2



RN 107719-70-0 HCAPLUS
 CN 1-Propanaminium, N,N-diethyl-2-hydroxy-N-methyl-3-[(2-methyl-1-oxo-2-propenyl)oxy], methyl sulfate (salt), polymer with ethenylbenzene (9CI)
 (CA INDEX NAME)

CM 1

CRN 100-42-5
 CMF C8 H8

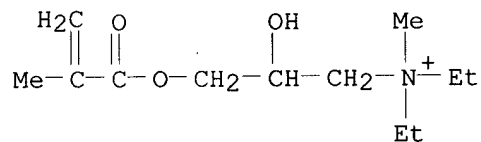


CM 2

CRN 107719-69-7
 CMF C12 H24 N O3 . C H3 O4 S

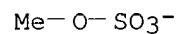
CM 3

CRN 147977-74-0
 CMF C12 H24 N O3



CM 4

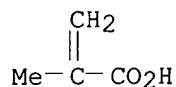
CRN 21228-90-0
 CMF C H3 O4 S



RN 107720-32-1 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, 3-(dimethylamino)-2-hydroxypropyl ester, propanoate (salt), polymer with ethenyl acetate and sodium 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 5536-61-8
 CMF C4 H6 O2 . Na

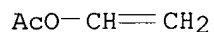


Na

CM 2

CRN 108-05-4

CMF C4 H6 O2



CM 3

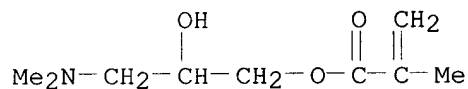
CRN 107720-31-0

CMF C9 H17 N O3 . C3 H6 O2

CM 4.

CRN 37817-81-5

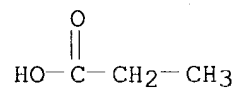
CMF C9 H17 N O3



CM 5

CRN 79-09-4

CMF C3 H6 O2



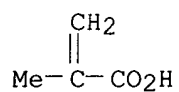
RN 107720-33-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, phosphate, polymer with 3-(dimethylamino)-2-hydroxypropyl 2-methyl-2-propenoate phosphate (salt), ethenylbenzene and sodium 2-methyl-2-propenoate (9CI)
(CA INDEX NAME)

CM 1

CRN 5536-61-8

CMF C4 H6 O2 . Na

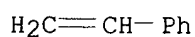


Na

CM 2

CRN 100-42-5

CMF C8 H8



CM 3

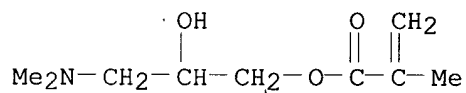
CRN 95243-16-6

CMF C9 H17 N O3 . x H3 O4 P

CM 4

CRN 37817-81-5

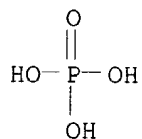
CMF C9 H17 N O3



CM 5

CRN 7664-38-2

CMF H3 O4 P



CM 6

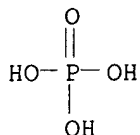
CRN 95215-19-3

CMF C8 H15 N O2 . x H3 O4 P

CM 7

CRN 7664-38-2

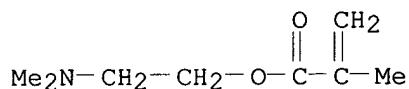
CMF H3 O4 P



CM 8

CRN 2867-47-2

CMF C8 H15 N O2



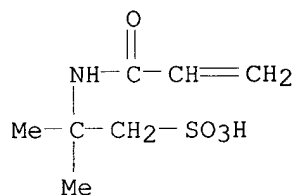
RN 107720-38-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, propanoate, polymer with ethenyl acetate and 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid monosodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 5165-97-9

CMF C7 H13 N O4 S . Na

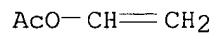


● Na

CM 2

CRN 108-05-4

CMF C4 H6 O2



CM 3

CRN 107720-37-6

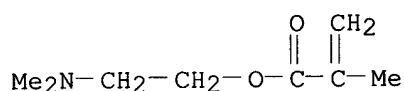
CMF C8 H15 N O2 . C3 H6 O2

CM 4

CRN 2867-47-2

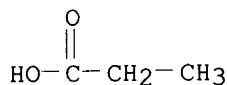
CMF C8 H15 N O2

KATHLEEN FULLER EIC 1700 308-4290



CM 5

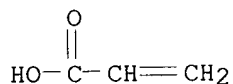
CRN 79-09-4
CMF C3 H6 O2



RN 107720-39-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with ethenylbenzene and sodium 2-propenoate (9CI) (CA INDEX NAME)

CM 1

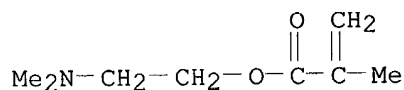
CRN 7446-81-3
CMF C3 H4 O2 . Na



● Na

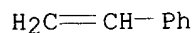
CM 2

CRN 2867-47-2
CMF C8 H15 N O2



CM 3

CRN 100-42-5
CMF C8 H8

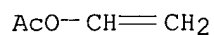


RN 107748-54-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(diethylamino)-2-hydroxypropyl ester, propenoate (salt), polymer with ethenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 108-05-4

CMF C4 H6 O2



CM 2

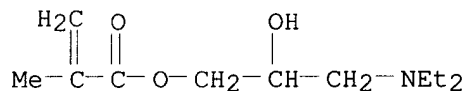
CRN 107719-67-5

CMF C11 H21 N O3 . C3 H6 O2

CM 3

CRN 21714-01-2

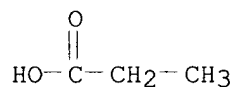
CMF C11 H21 N O3



CM 4

CRN 79-09-4

CMF C3 H6 O2



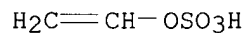
RN 107760-92-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(dimethylamino)-2-hydroxypropyl ester,
phosphate, polymer with ethenylbenzene and sodium ethenyl sulfate (9CI)
(CA INDEX NAME)

CM 1

CRN 5736-22-1

CMF C2 H4 O4 S . Na

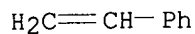


● Na

CM 2

CRN 100-42-5

CMF C8 H8



CM 3

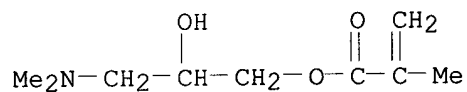
CRN 95243-16-6

CMF C9 H17 N O3 . x H3 O4 P

CM 4

CRN 37817-81-5

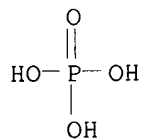
CMF C9 H17 N O3



CM 5

CRN 7664-38-2

CMF H3 O4 P



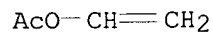
RN 107783-91-5 HCAPLUS

CN Butanoic acid, compd. with 2-(diethylamino)ethyl 2-methyl-2-propenoate (1:1), polymer with ethenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 108-05-4

CMF C4 H6 O2



CM 2

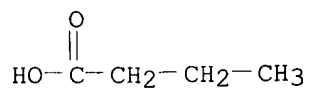
CRN 107783-90-4

CMF C10 H19 N O2 . C4 H8 O2

CM 3

CRN 107-92-6

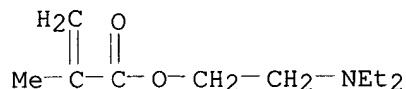
CMF C4 H8 O2



CM 4

CRN 105-16-8

CMF C10 H19 N O2



L46 ANSWER 40 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1987:139527 HCAPLUS

DN 106:139527

TI Wet **friction** material compositions

IN Nakazawa, Shiro; Nakajima, Junichi

PA Toshiba Tungaloy Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM F16D069-02

ICS C08G059-42; C08G059-62; C08L021-00; C08L063-00

CC 38-3 (Plastics Fabrication and Uses)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61256030	A2	19861113	JP 1985-99309	19850510
	JP 05045807	B4	19930712		

AB **Compns.** comprising an epoxy resin 5-30, a rubber (e.g. carboxy-modified nitrile rubber, epoxy-modified **acrylic** rubber) 3-40, and a **friction** filler contg. **lubricants** (e.g. graphite, Mo disulfide, Pb) <70, hard particles (with Mohs hardness >4) <30, abrasion adjustment materials (e.g. BaSO₄, CaCO₃, MgCO₃, cashew dust) <25, and fibers or whisker (e.g. pulp, C fibers, arom. polyamide fibers, phenolic fibers, Al-Si fibers, glass fibers, Cu or Cu alloy fibers, Fe or Fe alloy fibers, SiC whisker) <80% as well as sufficient amt. of a hardener [e.g. poly(p-hydroxystyrene) (I), phenolic resin, phenol-aralkyl resin, carboxylic anhydride] have high load capacity and **friction** coeff., low abrasion, and good mech. strength. Thus, a cured sheet of a mixt. of glass fibers 50, graphite 15, silica 5, carboxy-modified nitrile rubber 15, an epoxy resin 15, and I 7% had elastic modulus 50 kg/mm², Rockwell hardness (15Y) 75, low abrasion, and high durability and **oil** resistance.

ST abrasion wet **friction** material; epoxy resin wet **friction** material; nitrile rubber wet **friction** material; glass fiber wet **friction** material; graphite wet **friction** material; silica wet **friction** material; polyhydroxystyrene wet **friction** material

IT Phenolic resins, uses and miscellaneous

RL: **MOA (Modifier or additive use)**; USES (Uses)

(crosslinking agents, epoxy resins contg. rubbers and **friction** fillers and, for wet **friction** materials, with high **friction** coeff. and low abrasion)

IT Cashew

(dust, **friction** fillers, epoxy resins contg. rubbers and hardeners and, for wet **friction** materials, with high **friction** coeff. and low abrasion)

IT Abrasion-resistant materials

(epoxy resins contg. rubbers and **friction** fillers and hardeners as, for wet **friction** materials)

KATHLEEN FULLER EIC 1700 308-4290

- IT Crosslinking agents
(epoxy resins contg., for wet **friction** materials)
- IT Crystal whiskers
Pulp, cellulose
Carbon fibers, uses and miscellaneous
Glass fibers, uses and miscellaneous
Metallic fibers
RL: USES (Uses)
(**friction** fillers, epoxy resins contg. rubbers and hardeners and, for wet **friction** materials, with high **friction** coeff. and low abrasion)
- IT Epoxy resins, uses and miscellaneous
RL: USES (Uses)
(wet **friction** materials, contg. rubbers and **friction** fillers and hardeners, with high **friction** coeff. and low abrasion)
- IT **Friction** materials
(wet, epoxy resins contg. rubbers and **friction** fillers and hardeners as, with low abrasion)
- IT Rubber, synthetic
RL: USES (Uses)
(**acrylic**-epoxy, epoxy resins contg. **friction** fillers and hardeners and, for wet **friction** materials, with high **friction** coeff. and low abrasion)
- IT Epoxy resins, uses and miscellaneous
RL: USES (Uses)
(alicyclic, wet **friction** materials, contg. rubbers and **friction** fillers and hardeners, with high **friction** coeff. and low abrasion)
- IT Synthetic fibers
RL: USES (Uses)
(aluminum oxide-silica, **friction** fillers, epoxy resins contg. rubbers and hardeners and, for wet **friction** materials, with high **friction** coeff. and low abrasion)
- IT Polyamide fibers, uses and miscellaneous
RL: USES (Uses)
(arom., **friction** fillers, epoxy resins contg. rubbers and hardeners and, for wet **friction** materials, with high **friction** coeff. and low abrasion)
- IT Rubber, nitrile, uses and miscellaneous
RL: USES (Uses)
(carboxy-contg., epoxy resins contg. **friction** fillers and hardeners and, for wet **friction** materials, with high **friction** coeff. and low abrasion)
- IT Synthetic fibers, polymeric
RL: USES (Uses)
(phenolic resins, **friction** fillers, epoxy resins contg. rubbers and hardeners and, for wet **friction** materials, with high **friction** coeff. and low abrasion)
- IT **7440-44-0**
RL: USES (Uses)
(carbon fibers, **friction** fillers, epoxy resins contg. rubbers and hardeners and, for wet **friction** materials, with high **friction** coeff. and low abrasion)
- IT 24979-70-2, Poly(P-hydroxystyrene)
RL: **MOA (Modifier or additive use)**; USES (Uses)
(crosslinking agents, epoxy resins contg. rubbers and **friction** fillers and, for wet **friction** materials, with high **friction** coeff. and low abrasion)
- IT 471-34-1, Calcium carbonate, properties 546-93-0, Magnesium carbonate 1317-33-5, Molybdenum disulfide, properties **7439-92-1**, Lead, properties 7631-86-9, Silica, properties 7727-43-7, Barium sulfate **7782-42-5**, Graphite, properties
RL: PRP (Properties)

(**friction** fillers, epoxy resins contg. rubbers and hardeners and, for wet **friction** materials, with high **friction** coeff. and low abrasion)

IT 9004-34-6
RL: USES (Uses)
(pulp, **friction** fillers, epoxy resins contg. rubbers and hardeners and, for wet **friction** materials, with high **friction** coeff. and low abrasion)

IT 9003-18-3
RL: USES (Uses)
(rubber, carboxy-contg., epoxy resins contg. **friction** fillers and hardeners and, for wet **friction** materials, with high **friction** coeff. and low abrasion)

IT 25068-38-6, Bisphenol A-epichlorohydrin copolymer
RL: USES (Uses)
(wet **friction** materials, contg. rubbers and **friction** fillers and hardeners, with high **friction** coeff. and low abrasion)

IT 7440-44-0
RL: USES (Uses)
(carbon fibers, **friction** fillers, epoxy resins contg. rubbers and hardeners and, for wet **friction** materials, with high **friction** coeff. and low abrasion)

RN 7440-44-0 HCAPLUS
CN Carbon (7CI, 8CI, 9CI) (CA INDEX NAME)

C

IT 1317-33-5, Molybdenum disulfide, properties 7439-92-1, Lead, properties 7782-42-5, Graphite, properties
RL: PRP (Properties)
(**friction** fillers, epoxy resins contg. rubbers and hardeners and, for wet **friction** materials, with high **friction** coeff. and low abrasion)

RN 1317-33-5 HCAPLUS
CN Molybdenum sulfide (MoS2) (8CI, 9CI) (CA INDEX NAME)

S=Mo=S

RN 7439-92-1 HCAPLUS
CN Lead (8CI, 9CI) (CA INDEX NAME)

Pb

RN 7782-42-5 HCAPLUS
CN Graphite (8CI, 9CI) (CA INDEX NAME)

C

IT 9003-18-3
RL: USES (Uses)
(rubber, carboxy-contg., epoxy resins contg. **friction** fillers and hardeners and, for wet **friction** materials, with high **friction** coeff. and low abrasion)

RN 9003-18-3 HCAPLUS
CN 2-Propenenitrile, polymer with 1,3-butadiene (9CI) (CA INDEX NAME)

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CM 1

CRN 107-13-1

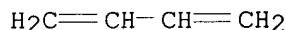
CMF C3 H3 N



CM 2

CRN 106-99-0

CMF C4 H6



L46 ANSWER 41 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1987:35919 HCAPLUS

DN 106:35919

TI High-temperature **lubricant compositions**

IN Tanigawa, Keiichi; Okita, Satoru; Uchida, Hide; Takenaka, Hideo

PA Nippon Steel Chemical Co., Ltd., Japan; Nippon Steel Corp.

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM **C10M173-02**ICI C10M173-02, C10M103-02, C10M103-06, C10M107-26, C10M107-28, C10M105-74;
C10N010-02, C10N030-06, C10N040-24, C10N050-02CC 51-8 (Fossil **Fuels**, Derivatives, and Related Products)

Section cross-reference(s): 55

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61195197	A2	19860829	JP 1985-36134	19850225
AB	Title compns. for metalworking, esp. useful in hot rolling of seamless steel pipes, comprise powd. graphite 100, water -sol. or water -dispersible polymers 5-70, and P compds. 1-60 parts. Thus, a lubricant contg. graphite (88% purity) 77, ethylene-vinyl acetate copolymer 13, and (NH4)2HPO4 10% was applied to a steel-sliding face and then tested under 19.5 kg/mm2 load at 1000.degree.. The friction coeff. of the lubricant was 0.03 vs. 0.06 for lubricant contg. no (NH4)2HPO4.				
ST	metalworking lubricant graphite seamless pipe; ethylene vinyl acetate copolymer lubricant; ammonium phosphate metalworking lubricant; steel pipe rolling lubricant				
IT	Acrylic polymers, uses and miscellaneous Polyoxyalkylenes, uses and miscellaneous RL: USES (Uses) (metalworking lubricants contg., high-temp., for hot rolling of seamless steel pipes)				
IT	Lubricants (metalworking, high-temp., graphite-based, for hot rolling of seamless steel pipes)				
IT	Pipes and Tubes (seamless, steel, hot rolling of, high-temp. lubricants for)				
IT	12597-69-2 RL: USES (Uses) (lubricants, metalworking, high-temp., graphite-based, for hot rolling				

KATHLEEN FULLER EIC 1700 308-4290

of seamless steel pipes)

IT 78-40-0 7558-79-4, Disodium hydrogen phosphate **7782-42-5**, Graphite, uses and miscellaneous 7783-28-0, Diammonium hydrogen phosphate **9010-86-0**, Ethyl **acrylate**-ethylene copolymer 9011-13-6, Maleic anhydride-styrene copolymer 24937-78-8, Ethylene-vinyl acetate copolymer 25322-69-4, Polypropylene glycol

RL: USES (Uses)
(metalworking lubricants contg., high-temp., for hot rolling of seamless steel pipes)

IT 12597-69-2

RL: USES (Uses)
(pipes and Tubes, seamless, steel, hot rolling of, high-temp. lubricants for)

IT **7782-42-5**, Graphite, uses and miscellaneous **9010-86-0**, Ethyl **acrylate**-ethylene copolymer

RL: USES (Uses)
(metalworking lubricants contg., high-temp., for hot rolling of seamless steel pipes)

RN 7782-42-5 HCAPLUS

CN Graphite (8CI, 9CI) (CA INDEX NAME)

C

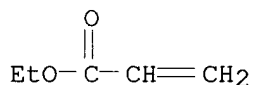
RN 9010-86-0 HCAPLUS

CN 2-Propenoic acid, ethyl ester, polymer with ethene (9CI) (CA INDEX NAME)

CM 1

CRN 140-88-5

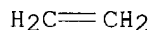
CMF C5 H8 O2



CM 2

CRN 74-85-1

CMF C2 H4



L46 ANSWER 42 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1986:534909 HCAPLUS

DN 105:134909

TI Abrasion-resistant nylon compositions

IN Kato, Toshio

PA Daiichi Seiko K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41J003-10

ICS C08J003-20; C08K003-38; C08L077-00; **C10M111-04**

ICI C10M111-04, C10M103-00, C10M103-02, C10M107-44; C10N040-02

CC 37-6 (Plastics Manufacture and Processing)

KATHLEEN FULLER EIC 1700 308-4290

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61095953	A2	19860514	JP 1984-216445	19841017
	JP 03041118	B4	19910621		
AB	Compns. comprising a nylon resin 100, a solid lubricant (e.g., BN) optionally treated with a silane coupling agent 50-200, and carbon fibers 10-50 parts have high abrasion resistance against tungsten and low friction coeff., water absorption rate, and linear expansion coeff. and are useful in prepg. wire guides for wire-dot printers. Thus, a mixt. of nylon 66 (CM 3007) 100, BN 80, PTFE 40, and polyacrylonitrile -based carbon fibers 30 parts was injection molded to give a wire guide having abrasion coeff. 0.01 .times. 10-6 cm ³ .min/kg.m.h, friction coeff. 0.15, heat distortion temp. 240.degree., linear expansion coeff. 1.0 .times. 10-5 cm/cm..degree.C, water absorption 0.2%, and durability in working 3 .times. 109 dots.				
ST	abrasion resistance nylon molding compn; boron nitride nylon blend; PTFE nylon blend abrasion resistance; carbon fiber nylon blend; lubricant boron nitride nylon; silane coupler boron nitride				
IT	Lubricants (boron nitride, nylon 66-PTFE-carbon fiber blends contg., for wire guides for wire-dot printers, abrasion-resistant)				
IT	Carbon fibers RL: USES (Uses) (nylon 66-boron nitride-PTFE blends, for wire guides for wire-dot printers, abrasion resistant)				
IT	Abrasion-resistant materials (nylon 66-boron nitride-PTFE-carbon fiber blends, for wire guides for wire-dot printers)				
IT	Coupling agents (silanes, for solid lubricants in nylon-carbon fiber blends)				
IT	Printing (dot, app., wire guides for, nylon 66-boron nitride-PTFE-carbon fiber blends as, abrasion-resistant)				
IT	32131-17-2, uses and miscellaneous RL: USES (Uses) (boron nitride-PTFE-carbon fiber blends, for wire guides for wire-dot printers, abrasion-resistant)				
IT	10043-11-5, uses and miscellaneous RL: USES (Uses) (lubricants, nylon 66-PTFE-carbon fiber blends, for wire guides for wire-dot printers, abrasion-resistant)				
IT	1317-33-5, uses and miscellaneous 9002-84-0 RL: USES (Uses) (nylon 66-boron nitride-carbon fiber blends, for wire guides for wire-dot printers, abrasion-resistant)				

L46 ANSWER 43 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1986:444870 HCAPLUS

DN 105:44870

TI Fluorine-containing polymer coating compositions

IN Kato, Akihiro; Hiramatsu, Yuji; Tokieda, Masato; Yamamoto, Takashi

PA Nippon Oils and Fats Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09D003-727

ICS C08L053-00

CC 42-10 (Coatings, Inks, and Related Products)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
			KATHLEEN FULLER EIC 1700 308-4290	

PI JP 60228574 A2 19851113 JP 1984-83850 19840427
 JP 03063998 B4 19911003

AB **Compns.** giving coatings with good **water**, soil, and oil repellency and low tack and **friction** coeff. 5-80% **solid lubricant** and 0.01-95% fluoroolefin copolymer prep'd. from polymeric peroxides or azo compds. Thus, 50 parts Me **methacrylate** was heated with 4 parts [CO(CH₂)₄CO₂(CH₂)₈O₂C(CH₂)₄CO₂]10 in 125 parts DMF at 70.degree. for 3 h, and the peroxy polymer soln. (90 parts) was mixed with 25 parts C₈F₁₇CH₂CH₂O₂CCH:CH₂ and 15 parts DMF over 30 min and heated at 70.degree. for 5 h to give a stable polymer dispersion. A mixt. of 0.05 part of this dispersion, 70 parts Epikote 1009, 105 parts MEK, and 10 parts PTFE was sand milled for 15 min, mixed with 50 parts urea resin, dild. with MEK, sprayed on steel, and baked at 180.degree. for 30 min to give a 15-.mu. coating with good properties.

ST fluoropolymer epoxy resin coating; oil resistance coating; antifriction coating fluoropolymer; soil resistance coating; **water** resistance coating; PTFE epoxy coating; peroxide polymeric coating

IT Polymerization catalysts
 (polymeric peroxides and azo compds., for fluoropolymer coatings)

IT Azo compounds
 Peroxides, uses and miscellaneous
 RL: USES (Uses)
 (polymeric, in fluoropolymer coating manuf.)

IT Coating materials
 (antifriction, contg. fluoropolymers, **water-** and **oil** -repellent)

IT Lubricants
 (solid, in coatings, blocking-resistant)

IT 25068-38-6
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings, contg. fluoropolymers and **solid lubricants** , **water-** and **oil**-repellent and antifriction)

IT 9003-22-9 53570-70-0 66419-42-9 67894-10-4 100919-11-7
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings, contg. fluoropolymers, **water-** and **oil** -repellent and antifriction)

IT 97126-83-5 97126-84-6 102939-04-8
 102939-05-9 102939-06-0 102939-07-1
 102939-42-4 103250-76-6
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings, **water-** and **oil**-repellent and antifriction)

IT 83560-00-3 83560-34-3 97126-78-8 97127-08-7 97127-10-1
 97127-11-2 97161-95-0 102771-89-1 102773-50-2 102868-73-5
 102938-99-8 102939-01-5 102939-03-7 102939-48-0 102966-23-4
 RL: USES (Uses)
 (in fluoropolymer coating manuf.)

IT 9002-84-0
 RL: USES (Uses)
 (lubricants, for fluoropolymer antifriction coatings)

IT 97126-83-5 97126-84-6 102939-04-8
 102939-05-9 102939-06-0 102939-07-1
 102939-42-4 103250-76-6
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings, **water-** and **oil**-repellent and antifriction)

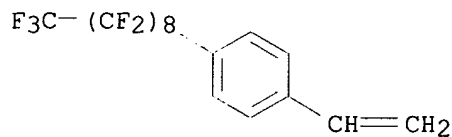
RN 97126-83-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with ethenyl acetate, ethenylbenzene and 1-ethenyl-4-(nonadecafluorononyl)benzene (9CI) (CA INDEX NAME)

CM 1

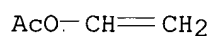
KATHLEEN FULLER EIC 1700 308-4290

CRN 97126-82-4
CMF C17 H7 F19



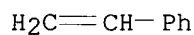
CM 2

CRN 108-05-4
CMF C4 H6 O2



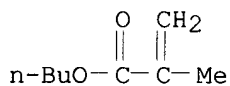
CM 3

CRN 100-42-5
CMF C8 H8



CM 4

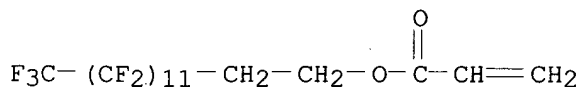
CRN 97-88-1
CMF C8 H14 O2



RN 97126-84-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, octadecyl ester, polymer with
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafuorododecyl
2-propenoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl
2-propenoate, N-(hydroxymethyl)-2-propenamide and
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-
pentacosafuorotetradecyl 2-propenoate (9CI) (CA INDEX NAME)

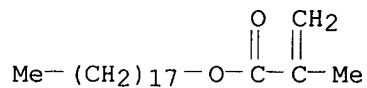
CM 1

CRN 34395-24-9
CMF C17 H7 F25 O2



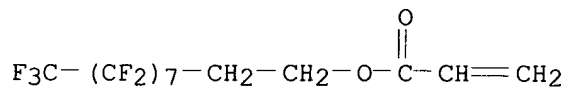
CM 2

CRN 32360-05-7
CMF C22 H42 O2



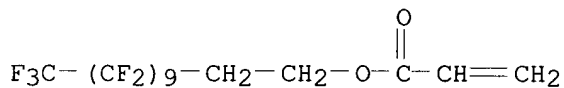
CM 3

CRN 27905-45-9
CMF C13 H7 F17 O2



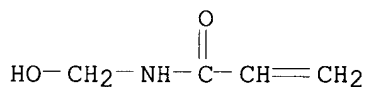
CM 4

CRN 17741-60-5
CMF C15 H7 F21 O2



CM 5

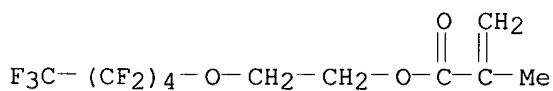
CRN 924-42-5
CMF C4 H7 N O2



RN 102939-04-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-[(undecafluoropentyl)oxy]ethyl ester,
polymer with butyl 2-propenoate and ethenylbenzene (9CI) (CA INDEX NAME)

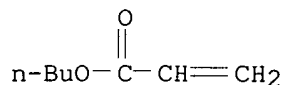
CM 1

CRN 101052-03-3
CMF C11 H9 F11 O3



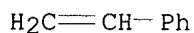
CM 2

CRN 141-32-2
CMF C7 H12 O2



CM 3

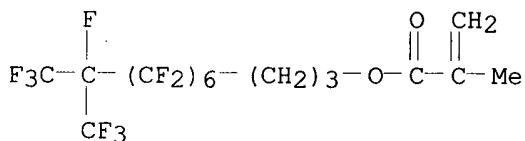
CRN 100-42-5
CMF C8 H8



RN 102939-05-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 4,4,5,5,6,6,7,7,8,8,9,9,10,11,11,11-hexadecafluoro-10-(trifluoromethyl)undecyl ester, polymer with 2-hydroxyethyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

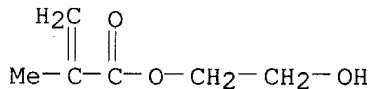
CM 1

CRN 31217-90-0
CMF C16 H11 F19 O2



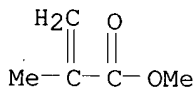
CM 2

CRN 868-77-9
CMF C6 H10 O3



CM 3

CRN 80-62-6
CMF C5 H8 O2

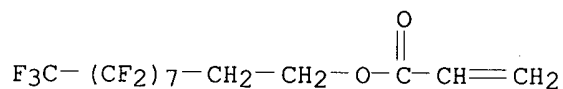


RN 102939-06-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with ethyl
KATHLEEN FULLER EIC 1700 308-4290

2-propenoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl
2-propenoate and 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl 2-propenoate
(9CI) (CA INDEX NAME)

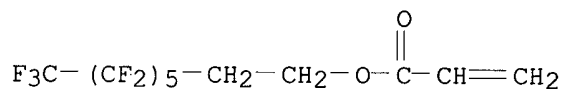
CM 1

CRN 27905-45-9
CMF C13 H7 F17 O2



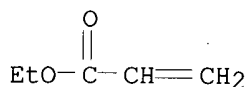
CM 2

CRN 17527-29-6
CMF C11 H7 F13 O2



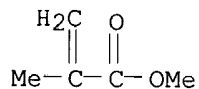
CM 3

CRN 140-88-5
CMF C5 H8 O2



CM 4

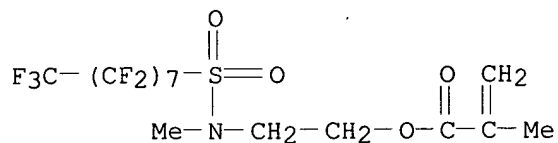
CRN 80-62-6
CMF C5 H8 O2



RN 102939-07-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-[[heptadecafluorooctyl)sulfonyl]methylamin
o]ethyl ester, polymer with chloroethene and methyl 2-methyl-2-propenoate
(9CI) (CA INDEX NAME)

CM 1

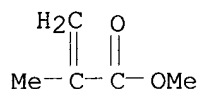
CRN 14650-24-9
CMF C15 H12 F17 N O4 S



CM 2

CRN 80-62-6

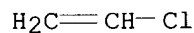
CMF C5 H8 O2



CM 3

CRN 75-01-4

CMF C2 H3 C1



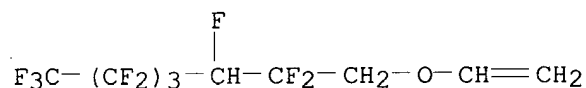
RN 102939-42-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, propyl ester, polymer with
7-(ethenyloxy)-1,1,1,2,2,3,3,4,4,5,6,6-dodecafluoroheptane and
.alpha.-(2-methyl-1-oxo-2-propenyl)-.omega.-hydroxypoly(oxy-1,2-
ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 97126-86-8

CMF C9 H6 F12 O

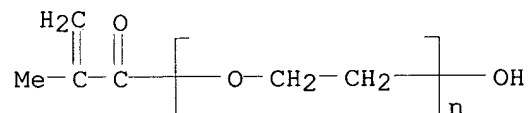


CM 2

CRN 25736-86-1

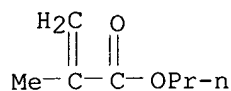
$$\text{CMF} \quad (\text{C}_2 \text{ H}_4 \text{ O})_n \text{ C}_4 \text{ H}_6 \text{ O}_2$$

CCI PMS

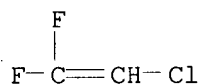


CM 3

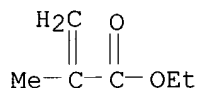
CRN 2210-28-8
CMF C7 H12 O2



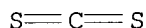
RN 103250-76-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with carbon disulfide
and 2-chloro-1,1-difluoroethene (9CI) (CA INDEX NAME)
CM 1
CRN 359-10-4
CMF C2 H Cl F2



CM 2
CRN 97-63-2
CMF C6 H10 O2



CM 3
CRN 75-15-0
CMF C S2



L46 ANSWER 44 OF 52 HCAPLUS COPYRIGHT 2001 ACS
AN 1984:494280 HCAPLUS
DN 101:94280
TI **Lubricant compositions**
PA Nippon Steel Chemical Co., Ltd., Japan; Nippon Steel Corp.
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC **C10M001-28; C10M001-54; C10M007-26**
CC 51-8 (Fossil **Fuels**, Derivatives, and Related Products)
Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 59011396	A2	19840120	JP 1982-120419	19820710
AB	Extreme-pressure lubricants with improved lubricities contain a KATHLEEN FULLER EIC 1700 308-4290				

graft-polymer. composite powder of a **solid lubricant** and vinyl monomer. Metal, P, B, S, and(or) Sb is present in the monomers as atoms and(or) in the **solid lubricant** as added powder for the polymer. Thus, gear **oil** (viscosity ISO VG 320) contg. 0.5 wt.% 100:25 powder. graphite-Ca **acrylate** copolymer [**91580-87-9**] (graft, as **solid lubricant**) was tested in a 4-ball tester at 80 kg and 280 rpm. The **friction** coeff. of the lubricant was 0.088 vs. 0.1 when the composite powder was replaced with powder. graphite.

ST extreme **pressure** lubricant; polymer graphite composite lubricant

IT Lubricating **oils**

(extreme-**pressure**, contg. graft graphite-calcium **acrylate** copolymer)

IT Lubricating **oil** additives

(extreme-**pressure**, graphite-calcium **acrylate** graft copolymer)

IT **91580-87-9**

RL: USES (Uses)

(graft, extreme-**pressure** additives, for lubricating **oils**)

IT **91580-87-9**

RL: USES (Uses)

(graft, extreme-**pressure** additives, for lubricating **oils**)

RN **91580-87-9** HCAPLUS

CN 2-Propenoic acid, calcium salt, polymer with graphite (9CI) (CA INDEX NAME)

CM 1

CRN 7782-42-5

CMF C

CCI MNS

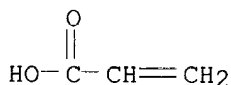
CDES 8:MN,GRAPHITE

C

CM 2

CRN 6292-01-9

CMF C3 H4 O2 . 1/2 Ca



● 1/2 Ca

L46 ANSWER 45 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1984:88515 HCAPLUS

DN 100:88515

TI Oil-based composition for cold rolling of aluminum

IN Balazs, Tibor; Dzsaja, Lajos; Fulop, Janos; Gabor, Laszlo; Gyongyossy, Lajos; Keresztessy, Zsolt; Keresztessy, Zsolt, Mrs.

PA Magyar Szenhidrogenipari Kutato-Fejlesztő Intezet, Hung.; Tiszai Koolajipari Vallalat; Aluminuimipari Tervezo Vallalat (ALUTERV);

KATHLEEN FULLER EIC 1700 308-4290

Szekesfehervari Konnyufemmu
 SO Hung. Teljes, 17 pp.
 CODEN: HUXXB
 DT Patent
 LA Hungarian
 IC C10M001-26
 CC 51-8 (Fossil Fuels, Derivatives, and Related Products)
 Section cross-reference(s): 56

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	HU 25938	O	19830829	HU 1978-NA1114	19781018
	HU 182909	B	19840328		
	CS 210037	B	19820129	CS 1979-6882	19791010
	DD 146467	Z	19810211	DD 1979-216230	19791015
	RO 78719	P	19821206	RO 1979-98953	19791016
	SU 1153836	A3	19850430	SU 1979-2832503	19791016
	PL 118347	B1	19810930	PL 1979-219012	19791017
PRAI	HU 1978-NA1114		19781018		

AB Cold rolling compns. for Al contain: deparaffinized base oil (b.p. 200-350.degree., pour point <0.degree., <0.1 wt.% S, <0.1 mg KOH/g acid no., 4-6 mm²/s viscosity at 20.degree., and <10 mg I/100 g I-Br mo.) and 1-10 wt.% additive compn. composed of .gtoreq.1 C8-18 aliph. alc. 10-75, an ester of a C8-18 aliph. alc. or its mixt. with C2-4 aliph. carbonic acid 20-60, and an alkanolamine ester or ester salt of formulas: R2R2N(CN2)xOR1 (I) or R2R3N+H(CH2)xOH R10- [where R1 = SO3(CH2)yCH3 or PO[O(CH2)yCH3]O(CH2)CH3 (in which y and z are 8-18), R2 and R3 = H, C1-5 hydroxyalkyl or (CH2)xOEst, x = 1-3 (preferably 2) and Est = C8-20 satd. or unsatd. straight-chain carboxylic acid residue] 1-30 wt.%. The 3 components work synergistically. The rolling compn. also contains adhesion improver polymers. Thus, a compn. contg. base oil 95, polyisobutylene [9003-27-4] (mol. wt. 5000) 2, C8-18 aliph. alc. mixt. 1, C10-18-alkyl acetate 1.5, I [x = 2, R1 = SO3(CH2)12CH3, R2 = R3 = (CH2)20C(CH2)CH3] [88273-27-2] 0.5% gave good results in the 4-ball friction test and in the Amsler A 135 instrument test.

ST aluminum cold rolling lubricant; polyisobutylene lubricant aluminum cold rolling; alc ester lubricant aluminum cold rolling; alkanolamine ester lubricant aluminum cold rolling

IT Lubricants

(oil-base, compn. for, for cold rolling of aluminum)

IT Alcohols

RL: USES (Uses)

(C8-18, lubricants contg., for cold rolling of aluminum)

IT Aluminum alloy, base

RL: USES (Uses)

(cold rolling of, oil-based compn. for)

IT 7429-90-5P, preparation

RL: PREP (Preparation)

(cold rolling of, oil-based compn. for)

IT 64-19-7D, C8-18 alkyl esters 79-09-4D, C12-14 aliph. esters 79-41-4D, alkyl esters, polymers 112-53-8 3724-61-6 4568-28-9 7664-38-2D, C10-19 mixed alkyl esters 9003-27-4 13961-86-9 25986-80-5 88262-53-7 88262-54-8 88262-55-9 88273-27-2

RL: USES (Uses)

(lubricants contg., for cold rolling of aluminum)

IT 7429-90-5P, preparation

RL: PREP (Preparation)

(cold rolling of, oil-based compn. for)

RN 7429-90-5 HCAPLUS

CN Aluminum (8CI, 9CI) (CA INDEX NAME)

A1

IT 25986-80-5

RL: USES (Uses)

(lubricants contg., for cold rolling of aluminum)

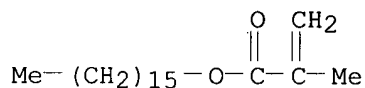
RN 25986-80-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, hexadecyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2495-27-4

CMF C20 H38 O2



L46 ANSWER 46 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1983:542886 HCAPLUS

DN 99:142886

TI Lubricant composition

PA Nippon Steel Chemical Co., Ltd., Japan; Nippon Steel Corp.

SO Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC C10M007-04; C10M007-14

CC 51-8 (Fossil Fuels, Derivatives, and Related Products)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 58049800	A2	19830324	JP 1981-148325	19810918
	JP 62034359	B4	19870727		

AB Lubricants for high-temp. metalworking contain powd. graphite 50-94, a vinyl copolymer 5-40, a hardening agent (e.g., melamine [108-78-1]) 0.1-10, and a dispersing agent (e.g., a polysaccharide) 0.2-10 wt.%. Thus, powd. graphite 77.8, **acrylic acid-Bu acrylate**

copolymer [25119-83-9] 16.7, melamine 1.6, and a polysaccharide 3.9 wt.% were mixed to obtain a metalworking lubricant exhibiting a **friction** coeff. (at 800.degree.) of 0.048, vs. 0.062 when the lubricant did not contain melamine.

ST lubricant metalworking **acrylic** polymer graphite; melamine polysaccharide metalworking lubricant additive

IT Polysaccharides, uses and miscellaneous

RL: USES (Uses)

(in metalworking lubricants based on **acrylic** polymers and graphite)

IT Lubricants

(metalworking, **acrylic** polymer-graphite mixts., contg. melamine and polysaccharides)

IT 108-78-1, occurrence

RL: OCCU (Occurrence)

(in metalworking lubricants based on **acrylic** polymers and graphite)

IT 7782-42-5, uses and miscellaneous 25119-83-9

RL: USES (Uses)

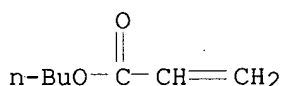
(lubricants contg., for metalworking)

KATHLEEN FULLER EIC 1700 308-4290

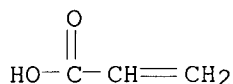
IT 7782-42-5, uses and miscellaneous 25119-83-9
 RL: USES (Uses)
 (lubricants contg., for metalworking)
 RN 7782-42-5 HCAPLUS
 CN Graphite (8CI, 9CI) (CA INDEX NAME)

C

RN 25119-83-9 HCAPLUS
 CN 2-Propenoic acid, polymer with butyl 2-propenoate (9CI) (CA INDEX NAME)
 CM 1
 CRN 141-32-2
 CMF C7 H12 O2



CM 2
 CRN 79-10-7
 CMF C3 H4 O2



L46 ANSWER 47 OF 52 HCAPLUS COPYRIGHT 2001 ACS
 AN 1980:552983 HCAPLUS
 DN 93:152983
 TI Lubricant for cold working of metals by **pressure**
 IN Belosevich, V. K.; Bezobrazov, V. N.; Oreshnikova, T. V.; Pavlenko, L. M.;
 Kurchik, N. N.; Ezhov, V. Ya.; Vituleva, L. A.; Razumov, V. V.; Ivanov, N.
 D.; et al.
 PA Scientific-Research Institute of Autotractor Materials, USSR
 SO U.S.S.R.
 From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1980, (22), 154.
 CODEN: URXXAF
 DT Patent
 LA Russian
 IC C10M001-26; C10M001-30
 CC 51-7 (Fossil **Fuels**, Derivatives, and Related Products)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	SU 740817	T	19800615	SU 1978-2623245	19780602
AB	The friction force was decreased and surface quality was improved by inclusion of 10-20 vol.% chlorinated paraffin and 1.5-5.0 vol.% of the product of extn. of oxidized natural fats or oxidized solid hydrocarbons with a hydrocarbon solvent in a metalworking lubricant contg. Zn dialkyl dithiophosphate 7-20, polymethacrylate 5-15, and mineral oil to make 100 vol.%.				
ST	metalworking lubricant cold; paraffin chloro metalworking lubricant; oxidn fat metalworking lubricant; hydrocarbon oxidn metalworking lubricant				

KATHLEEN FULLER EIC 1700 308-4290

IT Fats, reactions
Hydrocarbons, reactions
RL: RCT (Reactant)
(oxidn. of, exts. of, metalworking **lubricants** contg.,
compn. and properties of)

IT Alkanes, uses and miscellaneous
RL: USES (Uses)
(chloro, metalworking **lubricants** contg., **compn.** and
properties of)

IT **Lubricants**
(metalworking, for cold forming, **compn.** and properties of)

IT 15834-33-0D, dialkyl esters, zinc salts **25087-26-7D**, derivs.
polymers
RL: USES (Uses)
(metalworking **lubricants** contg., **compn.** and
properties of)

IT **25087-26-7D**, derivs. polymers
RL: USES (Uses)
(metalworking **lubricants** contg., **compn.** and
properties of)

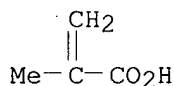
RN 25087-26-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 79-41-4

CMF C4 H6 O2



L46 ANSWER 48 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1980:449975 HCAPLUS

DN 93:49975

TI Lubricating properties of polymer-containing cutting fluids with various
glycerol contents

AU Proskuryakov, Yu. G.; Isaev, V. M.

CS USSR

SO Vestn. Mashinostr. (1980), (3), 42-4
CODEN: VMASAV; ISSN: 0042-4633

DT Journal

LA Russian

CC 51-7 (Fossil **Fuels**, Derivatives, and Related Products)
Section cross-reference(s): 37

AB The effect of **lubricant compn.** on **friction**
coeff. and crit. **pressure** (the **pressure** at which all
lubricant is extruded from metal surfaces) of cutting tools and
rollers in machining and shaping steel is discussed. The optimum compn.
was glycerol [56-81-5] 0.4-1.0, diethylene glycol [111-46-6] 0.15-0.3,
polyacrylamide [9003-05-8] 0.0258 triethanolamine
[102-71-6] 0.001, BzONa [532-32-1] 0.2, KPO3 0.05, urotropine 0.4%, soap
0-0.03, and **antioxidant** 0-0.05 vol.% in **water**.

ST rolling steel lubricant optimization; cutting fluid optimization;
polyacrylamide lubricant steelworking

IT **Lubricants**
(**polyacrylamide** emulsions, for machining and rolling steel,
optimization of)

IT **Lubricants**
(cutting fluids, **polyacrylamide** emulsions, optimization of)

IT Lubricating **oils**

KATHLEEN FULLER EIC 1700 308-4290

(cutting oils, emulsions, polyacrylamide, optimization of)

IT 56-81-5, occurrence 102-71-6, occurrence 111-46-6, occurrence
532-32-1 9003-05-8
RL: OCCU (Occurrence)
(in lubricants and cutting fluids, optimization of)

IT 9003-05-8
RL: OCCU (Occurrence)
(in lubricants and cutting fluids, optimization of)

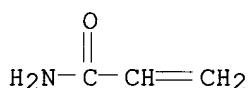
RN 9003-05-8 HCAPLUS

CN 2-Propenamide, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 79-06-1

CMF C3 H5 N O



L46 ANSWER 49 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1978:549351 HCAPLUS

DN 89:149351

TI Improving the lubricating properties of **solid lubricants**
and solid lubricating **compositions**

PA Dow Corning G.m.b.H., Ger.

SO Fr. Demande, 19 pp.
CODEN: FRXXBL

DT Patent

LA French

IC C10M007-00

CC 51-8 (Fossil **Fuels**, Derivatives, and Related Products)
Section cross-reference(s): 37

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2345510	A1	19771021	FR 1976-20477	19760705
	FR 2345510	B1	19820611		
	DE 2530002	A1	19770127	DE 1975-2530002	19750704
PRAI	DE 1975-2530002		19750704		

AB The lubricating properties of **solid lubricants** are improved by grafting with .ltoreq.7% reactive org. polymer. Thus, ball milling 20 g MoS2 with 345 mL 30% CH2Cl2 soln. of iso-Bu vinyl ether 24 h in the absence of H2O gives a graft polymer [67784-05-8] with **friction** .apprx.30 kg under a 2000 kg load, compared with .apprx.60 for ungrafted MoS2.

ST lubricant solid graft polymer; molybdenum disulfide grafted lubricant; vinyl ether grafted lubricant

IT Polybenzyls
Polymers, uses and miscellaneous
Siloxanes and Silicones, uses and miscellaneous
RL: USES (Uses)
(molybdenum disulfide grafted by, lubricants with reduced **friction**)

IT Lubricants
(polymer-grafted molybdenum disulfide, with reduced **friction**)

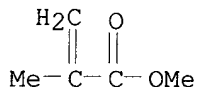
IT 110-86-1D, derivs., polymers with molybdenum disulfide 63946-39-4
63946-45-2 67784-05-8 67784-06-9 67784-07-0
RL: USES (Uses)
(graft, lubricants with reduced **friction**)

KATHLEEN FULLER EIC 1700 308-4290

IT 1317-33-5D, siloxane-grafted
 RL: USES (Uses)
 (lubricants with reduced **friction**)
 IT 63946-39-4
 RL: USES (Uses)
 (graft, lubricants with reduced **friction**)
 RN 63946-39-4 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with molybdenum sulfide
 (MoS2) (9CI) (CA INDEX NAME)
 CM 1
 CRN 1317-33-5
 CMF Mo S2



CM 2
 CRN 80-62-6
 CMF C5 H8 O2



IT 1317-33-5D, siloxane-grafted
 RL: USES (Uses)
 (lubricants with reduced **friction**)
 RN 1317-33-5 HCAPLUS
 CN Molybdenum sulfide (MoS2) (8CI, 9CI) (CA INDEX NAME)



L46 ANSWER 50 OF 52 HCAPLUS COPYRIGHT 2001 ACS
 AN 1975:142547 HCAPLUS
 DN 82:142547
 TI **Water-white**, adjustable polymer latexes as **aqueous**
 cold **lubricant compositions**
 IN Landau, Helmut; Mayer, Norbert
 PA Farbwerke Hoechst A.-G.
 SO Ger. Offen., 11 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 IC C10M
 CC 51-7 (Fossil **Fuels**, Derivatives, and Related Products)
 Section cross-reference(s): 37
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2318131	A1	19741024	DE 1973-2318131	19730411
	NL 7404693	A	19741015	NL 1974-4693	19740405
	GB 1470826	A	19770421	GB 1974-15250	19740405
	IT 1009793	A	19761220	IT 1974-21177	19740409
	FR 2225507	A1	19741108	FR 1974-12769	19740411

KATHLEEN FULLER EIC 1700 308-4290

PRAI DE 1973-2318086 19730411

DE 1973-2318131 19730411

AB Aq. cold lubricants for metal working consist of 0.01-20 wt.% of polymer latexes of **acrylates** contg. amine compds., sometimes mixed with emulsions. Thus, in a Reichert test or 4-ball app., the metal removal under a 100-kg load was detd. with various compns. Thus, polymer [25035-88-5] prepd. from Me **methacrylate** (I) 55, Bu **acrylate** (II) 5, Et **acrylate** (III) 5, and **methacrylic acid** (IV) 35% in the presence of 2% dodecyl mercaptan (V), at 1% aq. soln. contg. 3% emulsifier (triethanolamine, salt of an alkyl sulfate), operated under 30 kg load for 100 m to give **pressure** 340 kg/cm². A transparent **lubricant** contg. 5% of the above **compn.**, tested on a 4-ball app., operating at 100 kg for 1 min, gave coeff. of **friction** 0.04 and scar diam. 0.592 mm.

ST **acrylate** polymer cutting oil

IT Lubricating oil additives

(acrylic latexes, for cutting oils)

IT Lubricating oils

(cutting oils, acrylic latexes)

IT Polyoxyalkylenes

RL: USES (Uses)

(ether sulfate ammonium salts, emulsifiers for **acrylic** latex cutting oils)

IT Lubricants

(for metal working, contg. **acrylic** latexes)

IT Emulsifying agents

(triethanolamine alkyl sulfate derivs., for **acrylic** latex cutting oils)

IT Ethanol, 2,2',2''-nitrilotris-, alkyl sulfate derivs.

RL: USES (Uses)

(emulsifiers, for **acrylic** latex cutting oils)

IT 25035-88-5

RL: USES (Uses)

(cutting oils contg.)

IT 25035-88-5

RL: USES (Uses)

(cutting oils contg.)

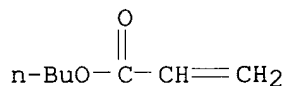
RN 25035-88-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate, ethyl 2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 141-32-2

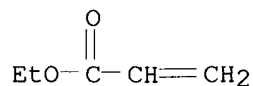
CMF C7 H12 O2



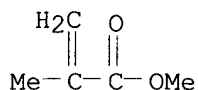
CM 2

CRN 140-88-5

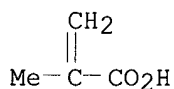
CMF C5 H8 O2



CM 3

CRN 80-62-6
CMF C5 H8 O2

CM 4

CRN 79-41-4
CMF C4 H6 O2

L46 ANSWER 51 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1968:420938 HCAPLUS

DN 69:20938

TI Lubricants containing p-polyphenyl

IN McMahon, Matthew A., Jr.; Chafetz, Harry; Coppoc, William J.

PA Texaco Inc.

SO U.S., 4 pp.

CODEN: USXXAM

DT Patent

LA English

NCL 252042100

CC 51 (Petroleum, Petroleum Derivatives, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3384588	A	19680521	US 1964-411720	19641117
AB	Poly-p-phenylene (I) is added to lubricant compns. to improve their high pressure properties. Thus, a slurry of 396 g. AlCl ₃ and 399 g. anhyd. CuCl ₂ in 1500 ml. dry benzene was refluxed 2 hrs., filtered, and the residue washed with aq. HCl until the filtrate was colorless and then washed with water until neutral. The remaining residue was then dried in vacuo, giving 80 g. insol., brown-black I. I was tested as a lubricant additive using a mineral oil with viscosity 310 SUS at 100.degree.F., and contg. 1% wt. vinylpyrrolidone-stearyl methacrylatelauryl methacrylate -Bu methacrylate polymer. The compns. were tested by detg. the Mean Hertz Load Test values and the av. scar diam. in the 4-Ball Wear Test. The results are shown in the table. I was also used as an additive for poly(dimethylsiloxane) synthetic lubricating oil and Li greases . [TABLE OMITTED] When tested as a dry lubricant, I showed the same order of coeff. of friction as MoS ₂ and poly(tetrafluoroethylene) (Teflon).				
ST	polyphenylene lubricants; lubricants polyphenylene; high pressure lubricants				
IT	Lubricating grease additives Lubricating oil additives (extreme- pressure additive, poly(p-phenylene) as)				
IT	25190-62-9				

KATHLEEN FULLER EIC 1700 308-4290

RL: USES (Uses)

(as extreme-**pressure** additive for lubricating oils
and lubricating **greases**)

L46 ANSWER 52 OF 52 HCAPLUS COPYRIGHT 2001 ACS

AN 1962:61778 HCAPLUS

DN 56:61778

OREF 56:11889a-d

TI The effect of **lubricant** viscosity and **composition** on
engine. **friction** and bearing wear. II

AU Okrent, E. H.

CS Esso Research & Eng. Co., Linden, NJ

SO ASLE (Am. Soc. Lubrication Engrs.) Trans. (1961), 4, 257-62

DT Journal

LA Unavailable

CC 52 (Petroleum and Petroleum Derivatives)

AB cf. CA 55, 23989b. The addn. of polyisobutylene or poly(**methylmethacrylate**) decreases bearing wear and engine **friction**. Varying amts. of 1 of 2 polyisobutylenes (PIB) (0.31 and 0.5 intrinsic viscosity in toluene) or 3 poly(**methylmethacrylates**) (PMA) (0.31, 0.55, and 1.2 intrinsic viscosity) were added to mineral **oils** to obtain a final blend with a viscosity of 12.4 centistokes at 210.degree.F. Addn. of either PIB decreases the bearing wear rate from 1.4 mg./hr. (0 wt. % PIB) to a plateau of 0.85 mg./hr. at 6 wt. % PIB. The addn. of PMA shows a similar decrease to a plateau. The addn. of 2 wt. % of the lowest-mol.-wt. PMA actually increases bearing wear (2.8 mg./hr. vs. 1.4 mg./hr. at 0 concn.). Further addn. of low-mol.-wt. PMA reduces bearing wear to 0.4 mg./hr. (at approx. 10 wt. % concn.). The higher-mol.-wt. PMA decrease bearing wear but their effect is less marked with plateau values of about 0.96 and 0.8 mg./hr. for the 0.5 and 1.2 intrinsic viscosity polymers, resp. Analysis of the data indicates that polymer effects are related to the viscoelastic nature of the **oil**. The addn. of 4 vol. % of **detergent** (mixt. of metal sulfonate, metal phenate, and P2S2-treated hydrocarbon) to a mineral **oil** increases bearing wear (2.79 vs. 1.4 mg./hr. for the pure mineral **oil**). Addn. of 4 vol. % of the surfactant mixt. to **oils** contg. polymers increased the wear rate from 0.09 to 0.29 reg./hr. at the 1 reg./hr. level. **Friction** increases more when **detergent** is added to **oils** contg. polymers than to mineral **oil**. This suggests that, in addn. to the bulk properties of the added polymer, surface properties of the polymer affect lubricating characteristics.

=> FILE WPIDS

FILE 'WPIDS' ENTERED AT 15:17:25 ON 01 MAY 2001
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FILE LAST UPDATED: 25 APR 2001

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KATHLEEN FULLER EIC 1700 308-4290

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Patents
in
World Patents*

SEE <http://www.derwent.com/covcodes.html> <<<

=> D QUE L22

L19 246454 SEA FILE=REGISTRY ABB=ON PACR/PCT
L22 86455 SEA FILE=REGISTRY RAN=(,114859-25-5) ABB=ON L19 OR L19

=> D QUE L56

L4 46 SEA FILE=REGISTRY ABB=ON (10043-11-5/BI OR 10108-64-2/BI OR
10124-54-6/BI OR 10294-26-5/BI OR 10402-24-1/BI OR 12138-09-9/B
I OR 124448-23-3/BI OR 12597-70-5/BI OR 12597-71-6/BI OR
12684-19-4/BI OR 12704-93-7/BI OR 127289-34-3/BI OR 1303-96-4/B
I OR 1314-13-2/BI OR 1317-33-5/BI OR 1319-46-6/BI OR 1327-33-9/
BI OR 14807-96-6/BI OR 150523-07-2/BI OR 159074-52-9/BI OR
186270-48-4/BI OR 186270-50-8/BI OR 186270-52-0/BI OR 25014-41-
9/BI OR 52292-17-8/BI OR 57175-99-2/BI OR 598-63-0/BI OR
64176-75-6/BI OR 7429-90-5/BI OR 7439-92-1/BI OR 7439-97-6/BI
OR 7440-22-4/BI OR 7440-28-0/BI OR 7440-29-1/BI OR 7440-31-5/BI
OR 7440-44-0/BI OR 7440-50-8/BI OR 7440-55-3/BI OR 7440-57-5/B
I OR 7440-74-6/BI OR 7646-79-9/BI OR 77-90-7/BI OR 7779-90-0/BI
OR 7782-42-5/BI OR 7790-80-9/BI OR 9003-05-8/BI)
L5 9 SEA FILE=REGISTRY ABB=ON L4 AND PMS/CI
L6 2 SEA FILE=REGISTRY ABB=ON L5 AND 1-4/N
L7 6 SEA FILE=REGISTRY ABB=ON AQUASORB ?/CN
L8 3 SEA FILE=REGISTRY ABB=ON (AQUASTORE/CN OR "AQUASTORE B"/CN OR
"AQUASTORE F"/CN)
L9 1 SEA FILE=REGISTRY ABB=ON "TERRA-SORB GB"/CN
L10 3 SEA FILE=REGISTRY ABB=ON ("WATER LOCK SUPERABSORBENT POLYMER
A 100"/CN OR "WATER LOCK SUPERABSORBENT POLYMER A 200"/CN OR
"WATER LOCK SUPERABSORBENT POLYMER G 100"/CN)
L11 1 SEA FILE=REGISTRY ABB=ON "SGP 502S"/CN
L12 4 SEA FILE=REGISTRY ABB=ON STOCKOSORB ?/CN
L13 1 SEA FILE=REGISTRY ABB=ON "FAVOR CA 100"/CN
L14 5 SEA FILE=REGISTRY ABB=ON ARIDALL ?/CN
L15 34 SEA FILE=REGISTRY ABB=ON SANWET ?/CN
L16 8 SEA FILE=REGISTRY ABB=ON ALCOSORB ?/CN
L17 44 SEA FILE=REGISTRY ABB=ON L4 NOT L6
L18 103 SEA FILE=REGISTRY ABB=ON L17 OR (L7 OR L8 OR L9 OR L10 OR L11
OR L12 OR L13 OR L14 OR L15 OR L16)
L19 246454 SEA FILE=REGISTRY ABB=ON PACR/PCT
L20 246454 SEA FILE=REGISTRY ABB=ON L19 OR L19
L21 80000 SEA FILE=REGISTRY RAN=(163035-34-5,) ABB=ON L19 OR L19
L22 86455 SEA FILE=REGISTRY RAN=(,114859-25-5) ABB=ON L19 OR L19
L23 79999 SEA FILE=REGISTRY ABB=ON L20 NOT (L21 OR L22)
L24 29277 SEA FILE=HCAPLUS ABB=ON L21
L25 270857 SEA FILE=HCAPLUS ABB=ON L22
L26 38382 SEA FILE=HCAPLUS ABB=ON L23
L27 1183207 SEA FILE=HCAPLUS ABB=ON L18
L28 32138 SEA FILE=HCAPLUS ABB=ON (L24 OR L25 OR L26) AND L27
L32 1213 SEA FILE=HCAPLUS ABB=ON ?ACRYL? AND LUBRICANT?(S) (COMPOSITION?
OR COMPNS)
L33 864 SEA FILE=HCAPLUS ABB=ON (L24 OR L25 OR L26) AND LUBRICANT?(S) (
COMPOSITION? OR COMPNS)
L34 132 SEA FILE=HCAPLUS ABB=ON (L32 OR L33) AND FRICTION?
L35 27 SEA FILE=HCAPLUS ABB=ON L34 AND L28
L36 55 SEA FILE=HCAPLUS ABB=ON L34 AND MOA/RL
L37 37 SEA FILE=HCAPLUS ABB=ON L34 AND (SOLID(W)LUBRICANT? OR
ANTIOXID? OR RUST?(3A)INHIBIT? OR ANTIWEAR? OR DETERGENT? OR
DISPERSANT? OR PRESSURE OR FOAM?(3A)INHIBIT?)
L38 1 SEA FILE=HCAPLUS ABB=ON L34 AND SUPERABSORB?
L39 92 SEA FILE=HCAPLUS ABB=ON (L35 OR L36 OR L37 OR L38)
L40 24 SEA FILE=HCAPLUS ABB=ON L39 AND FUEL?/SC, SX

KATHLEEN FULLER EIC 1700 308-4290

L41 21 SEA FILE=HCAPLUS ABB=ON L39 AND (WATER? OR H2O OR AQ OR
 AQUEOUS)
 L42 33 SEA FILE=HCAPLUS ABB=ON L39 AND (OIL# OR GREASE#)
 L43 1 SEA FILE=HCAPLUS ABB=ON L39 AND (SLID? OR MOV?) (3A) SURFACE?
 L44 51 SEA FILE=HCAPLUS ABB=ON (L40 OR L41 OR L42 OR L43)
 L45 24 SEA FILE=HCAPLUS ABB=ON L39 AND C10M?/IC
 L46 52 SEA FILE=HCAPLUS ABB=ON L44 OR L45
 L47 SEL L46 1- PN APPS : 265 TERMS
 L48 56 SEA FILE=WPIDS ABB=ON L47
 L49 3998 SEA FILE=WPIDS ABB=ON LUBRICANT?(4A) (COMPOSITION? OR COMPNS)
 L50 623 SEA FILE=WPIDS ABB=ON L49 AND FRICTION?
 L51 30 SEA FILE=WPIDS ABB=ON L50 AND ?ACRYL?
 L52 29 SEA FILE=WPIDS ABB=ON (L48 OR L51) NOT L48
 L53 19 SEA FILE=WPIDS ABB=ON L52 AND C10M?/IC
 L54 10 SEA FILE=WPIDS ABB=ON L52 NOT L53
 L55 3 SEA FILE=WPIDS ABB=ON L54 AND (PISTON? OR CONVEY?)
 L56 22 SEA FILE=WPIDS ABB=ON L53 OR L55

=> D L56 ALL 1-22

L56 ANSWER 1 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
 AN 2000-258689 [23] WPIDS
 DNC C2000-079254
 TI Composition useful as transmission fluids comprises lubricant oil, shear
 stable viscosity modifier, overbased metal salt, phosphorus compound and
 at least two **friction** modifiers.
 DC A13 A14 A97 E19 H07
 IN SUMIEJSKI, J L; WARD, W C
 PA (LUBR) LUBRIZOL CORP
 CYC 29
 PI EP 987311 A2 20000322 (200023)* EN 18p C10M167-00 <--
 R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
 RO SE SI
 AU 9947414 A 20000323 (200025) C10M125-10 <--
 JP 2000087068 A 20000328 (200026) 19p C10M163-00 <--
 CA 2282059 A1 20000314 (200035) EN C10M163-00 <--
 US 6103673 A 20000815 (200041) C10M141-12 <--
 ADT EP 987311 A2 EP 1999-307226 19990913; AU 9947414 A AU 1999-47414 19990907;
 JP 2000087068 A JP 1999-261183 19990914; CA 2282059 A1 CA 1999-2282059
 19990908; US 6103673 A US 1998-152878 19980914
 PRAI US 1998-152878 19980914
 IC ICM C10M125-10; C10M141-12; C10M163-00;
 C10M167-00
 ICS C10M125-26; C10M129-32; C10M129-40;
 C10M133-46; C10M141-10
 ICI C10N010:02, C10N010:04, C10N020:00, C10N020:02, C10N030:04, C10N030:06,
 C10N040:04; C10M125:24; C10M129:40; C10M133:08; C10M133:44;
 C10M137:04; C10M137:06; C10M137:10; C10M139:00; C10M159:16;
 C10M159:22; C10M159:24; C10M163-00
 AB EP 987311 A UPAB: 20000516
 NOVELTY - In the composition, the total amount of the **friction**
 modifiers is limited to those amounts which provide a metal-to-metal
 coefficient of **friction** of at least about 0.120 as measured at
 110 degrees by ASTM-G-77, using the **composition** as a
lubricant.

DETAILED DESCRIPTION - A composition comprises (a) a major amount of
 an oil of lubricating viscosity; (b) a viscosity modifying amount of a
 shear stable viscosity modifier; (c) at least about 0.1 percent by weight
 of an overbased metal salt, where the overbase salt contributes about 0.5
 to about 10 Total Base Number to the composition; (d) at least 0.1 percent
 by weight of at least one phosphorus compound and (e) about 0.1 to 0.45
 percent by weight of a combination of at least two **friction**

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modifiers, at least one of the **friction** modifiers being selected from zinc salts of fatty acids having at least 10 carbon atoms, hydrocarbyl imidazolines containing at least 12 carbon atoms in the hydrocarbyl group, and borated epoxides; the amount of the **friction** modifier from the group being at least about 0.03 percent by weight of the composition. An INDEPENDENT CLAIM is included for a concentrate.

USE - Used as lubricating oils and greases in industrial applications and automotive engines, transmissions and axles.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: A04-F01A; A12-W02A; E05-B01; E05-G09A; E05-G09B; E05-L03C; E05-L03D; E07-A03A; E07-D09C; E10-A09B4; E10-A09B5; E10-B03B; E31-Q04; E31-Q05; H07-A; H07-G09

L56 ANSWER 2 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 2000-116952 [10] WPIDS

DNC C2000-035809

TI Dispersants for modifying dispersancy or viscometric properties of fluid for use in **lubricant** or fuel **compositions**.

DC A12 A95 A97 H06 H07

IN COOLBAUGH, T S; LOVELESS, F C; MARLIN, J E; MATTHEWS, D N; STENSLER, K G

PA (MOBI) MOBIL OIL CORP

CYC 29

PI WO 9967349 A1 19991229 (200010)* EN 67p C10M155-04 <--

RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

W: AU BR CA CN IN JP KR MX NO RU SG

AU 9943137 A 20000110 (200025) C10M155-04 <--

ADT WO 9967349 A1 WO 1999-US11561 19990526; AU 9943137 A AU 1999-43137 19990526

FDT AU 9943137 A Based on WO 9967349

PRAI US 1998-102681 19980623

IC ICM **C10M155-04**

ICS C10L001-18; C10L001-22; C10L001-30

AB WO 9967349 A UPAB: 20000228

NOVELTY - The dispersant having polymeric structures which permit highly selective control of the degree of unsaturation and consequent functionalization comprises a copolymer of two different conjugated dienes which have been hydrogenated, functionalized, optionally modified and post treated.

DETAILED DESCRIPTION - The dispersant substance for modifying the dispersancy or viscometric properties of fluid comprises a copolymer of two conjugated dienes. The first conjugated diene comprises one or more substituted conjugated diene having 5C atoms of formula (I).

$R1-C(R2)=C(R3)C(R4)=C(R5)-R6$ (I)

R1-R6 = H or a hydrocarbyl group.

At least one of R1-R6 is a hydrocarbyl group and after polymerization, the unsaturation of the polymerized first conjugated diene is of formula (II).

$(R1-C(RII)=C(RIV)-RIII)$ (II)

RI-RIII = H or hydrocarbyl group.

Either both RI and RII are hydrocarbyl groups or both RIII and RIV are hydrocarbyl groups. The second conjugated diene comprises a less substituted conjugated diene different from the first diene and has at least 4C atoms of formula (III).

$R7-(R8)=C(R9)-C(R10)=C(R11)-R12$ (III)

R7-R12 = as R1-R6.

After polymerization, the unsaturation of the polymerized second conjugated diene is of formula (IV).

$RV-C(RVI)=C(RVII)-RVIII$ (IV)

RV-RVIII = as RI-RIV.

At least one of RV-RVIII is H and at least one of RVII or RVIII is a hydrocarbyl group. The copolymer has been functionalized by (i)

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hydrogenating the copolymer, (ii) functionalizing the hydrogenated copolymer to provide a functionalized copolymer having at least one polar functional group or (iii) post treating the functionalized copolymer with a post treating agent.

INDEPENDENT CLAIMS are also included for:

(A) modifying the dispersancy or viscometric properties of a fluid comprising admixing with a fluid of dispersant substance; and

(B) a dispersant-modified fluid having modified dispersancy or viscometric properties.

USE - The dispersant is used for modifying the dispersancy or viscometric properties of fluids. The dispersant can be employed in any **lubricant** or fuel **composition** to control the deposition of sludge particles. The compound is also used as lubricant additives such as adhesives, sealants and impact modifiers.

ADVANTAGE - The dispersant substance provides improved engine performance, controlled molecular weight, controlled molecular weight distribution, controlled polymer structure, variable/controlled amounts and distribution of functionality, superior thermal stability, potentially permitting reduced treat levels and yielding benefits such as improved viscometric properties.

Dwg.0/0

FS CPI

FA AB

MC CPI: A10-E01; A12-T03A; A12-W02A; A12-W12C; H06-D03; H07-G03

L56 ANSWER 3 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 1998-345964 [30] WPIDS

DNC C1998-106694

TI **Lubricant composition** for machine tool slides - based on paraffinic or naphthenic mineral oil, and various additives.

DC A97 H07

IN PETROF, M; POPOIU, E; RADU, C; SECAREANU, A

PA (ICER-N) ICERP SA

CYC 1

PI RO 112751 B 19971230 (199830)*

C10M101-02 <--

ADT RO 112751 B RO 1995-1039 19950526

PRAI RO 1995-1039 19950526

IC ICM **C10M101-02**

AB RO 112751 B UPAB: 19980730

A **lubricant composition** for machine tool slides contains (all wt.%): 86-95 paraffinic or naphthenic mineral oil having a viscosity of 27-165 cSt at 40 deg. C temperature; 4-11 **friction** modifying agent of oxidised vegetable oil type; 0.003-0.05 poly-iso-butene type additive to improve lubricant film cohesion, and optionally, 0.7-1 antioxidant of di:tertiary-butyl-para-cresol type, and respectively: 0.7-1.2 wear protection additive of tri:cresyl-phosphate type; 0.1-0.3 **polymethacrylate** type flow-point depressant, 0.03-0.05 rust-preventative as an organic-acid-alkylate, insoluble in water; 0.5-1.5 multifunctional additive containing maximum 8.8% Zn, and maximum 8% P, and containing 0.001-0.002 methyl-silicone additive.

FS CPI

FA AB

MC CPI: A04-F01A; A12-W02A; H07-A; H07-F

L56 ANSWER 4 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 1996-233040 [24] WPIDS

DNC C1996-073756

TI Biodegradable chain-saw **lubricant compsn.** - contg. maleic anhydride ester or vegetable oil, refined vegetable oil, natural grease based multi functional additive, **polymethacrylate** based drop pt. improving cpd., etc..

DC A97 H07

IN BALADINCZ, J; DOBEST, E; KALLO, I; LENTI, M; VALASEK, I

PA (MOLM-N) MOL MAGYAR OLAJ ES GAZIPARI RT

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CYC 1
 PI HU 210408 B 19950728 (199624)* 1p C10M169-04 <--
 ADT HU 210408 B HU 1993-3126 19931103
 PRAI HU 1993-3126 19931103

IC ICM C10M169-04

AB HU 210408 B UPAB: 19960618

A biologically degradable chain-saw **lubricant compsn.**
 based on vegetable oil contains (all wt. %): 85.0-95.0 ester type oil
 prepd. from a vegetable oil, contg. 1.0-5.0 % stearic acid, 5-10 %
 linolenic acid and erucic-acid free, and a 4-12 C unsatd. di:carboxylic
 acid-anhydride pref. maleic anhydride, in 1:(0.1-1.6) molar ratio. 1.0-5.0
 wetting agent (mol. wt.: 6000-8000) prepd. from natural greases, modified
 by multi-hydroxy-alcohols or poly-oxy-alkylene gps. 0.1-1.5 complex action
 zinc-free, **friction** reducing, increased pressure resistant, and
 corrosion preventing additive. 0-1.0 drop pt. temp. increasing poly-
methacrylate based additive 0-10.0 refined vegetable oil and 0-10
 ppm oil. sol. colourant.

Dwg.0/0

FS CPI

FA AB

MC CPI: A04-F06E3; A12-W02A; H07-A

L56 ANSWER 5 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 1994-354911 [44] WPIDS

DNC C1994-161926

TI Low **friction lubricant** coating **compsn.** for
 engine **pistons** - contains high strength heat resisting binder,
 solid lubricant and modifier..

DC A12 A82 G02

PA (TAKA-N) TAKATA CORP; (TOYT) TOYOTA JIDOSHA KK

CYC 1

PI JP 06279708 A 19941004 (199444)* 6p C09D005-00

ADT JP 06279708 A JP 1993-68372 19930326

PRAI JP 1993-68372 19930326

IC ICM C09D005-00

ICS C09D171-02; C09D201-00

AB JP 06279708 A UPAB: 19941223

Lubricant paints contain a high strength heat-resisting binder 100 pts wt,
 a solid lubricant 5-300 pts wt and a modifier 5-100 pts wt.

The modifier consists of vinyl resins, polybutadiene,
 polyethyleneglycol **acrylate** and a plasticiser. The binder is eg
 epoxy-based binders, bismaleimide/triazine-based binders, and xylene-based
 binders. Pref solid lubricant is fluorine cpd, pref having the particle
 size of up to 10 micron m.

USE/ADVANTAGE - Used as coating agents for **pistons** of
 engines and other lubricating material, providing **friction**
 -resisting coat film having low **friction** coefft because of the
 improved adhesion (shear adhesiveness) to substrate.

Dwg.0/0

FS CPI

FA AB; GI

MC CPI: A08-M03; A12-H10; G02-A05D

L56 ANSWER 6 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 1993-366282 [46] WPIDS

DNC C1993-162816

TI Lubricant for sealing profiled joints - contains **polyacrylamide**
 or carboxymethyl cellulose and plastic soap lubricant and has increased
 sealing effect.

DC A11 A14 A97 H01 H07

IN KALASHNIKOV, YU T

PA (KALA-I) KALASHNIKOV YU T

CYC 1

PI SU 1772143 A1 19921030 (199346)* 5p C10M169-04 <--

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ADT SU 1772143 A1 SU 1990-4899358 19901102
 PRAI SU 1990-4899358 19901102
 IC ICM C10M169-04
 ICS C10M145-40
 ICI C10N040:34; C10M117:02, C10M145-40, C10M149:18
 AB SU 1772143 A UPAB: 19940103

The **lubricant compsn.** contains in wt.%):

polyacrylamide or carboxymethyl cellulose 20-30 and soap-plastic lubricant 70-80.

Granulated **polyacrylamide** has granule dia. 3-7 mm, M.Wt. (3-5) x 10 power 6, thermal resistance 180 deg. C and density 1.08-1.12 g/cc. Carboxymethyl cellulose is obtd. by reacting alkali cellulose with resistance 160 deg. C, density 1.59-1.70 g/cc and moisture content up to 10-15%. Soap-plastic lubricant can be Solidol Zh, with working range (-20) - (+65) deg. C, or Press-Solidol Zh, for manual lubricating of **friction** pairs working at temp. below (-20) deg. C. Graphite lubricant USSA can also be used.

Lubricant compsn. is prepd. by loading lubricant component into mixer and adding **polyacrylamide**, stepwise, with continuous mixing, over 15-20 min.. The temp. of prepn. has to be at least 20 deg. C and mixer can also be optionally heated to 77 deg. C in case of use of graphite lubricant and to 75 deg. C in case of use of Solidol Zh. Tests show that proposed **lubricant compsn.** ensures 100% hermeticity of profiled joints and its antifriction properties are comparable to those of the known lubricant.

USE/ADVANTAGE - Lubricant can be used for sealing of profiled joints of casing string, flange-type joints of pipelines etc. and provides 100% hermeticity. Bul.40/30.10.92.

Dwg.0/0

FS CPI

FA AB

MC CPI: A03-A04A; A04-D04A; A12-S09A; A12-W02; H07-A

✓ L56 ANSWER 7 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 1990-302955 [40] WPIDS

DNC C1990-130989

TI Lubricant for plunger tip used in aluminium casting - contg. base mineral oil, and oils, fats, fatty acid ester and/or white solid lubricant e.g. mica.

DC H07 M22

PA (YUSI) YUSHIRO CO

CYC 1

PI JP 02215894 A 19900828 (199040)*

JP 06076587 B2 19940928 (199437) 4p C10M111-02 <--

ADT JP 02215894 A JP 1989-36034 19890217; JP 06076587 B2 JP 1989-36034 19890217

FDT JP 06076587 B2 Based on JP 02215894

PRAI JP 1989-36034 19890217

IC C10M101-02; C10M103-06; C10M105-32;

C10M111-02; C10N020-02; C10N040-24

ICM C10M111-02

ICS C10M101-02; C10M103-06; C10M105-32;

C10N020-02; C10N040-24

ICA B22D017-04

ICI C10N020:02; C10N040:24; C10M101:02, C10M101:04, C10M103:06, C10M105:32, C10M111-

AB JP 02215894 A UPAB: 19930928

A **lubricant compsn.** comprises a base mineral oil and at least one of oils, fats or fatty acid ester and white solid lubricant, and has a kinematic viscosity of 250-500 mm³/sec.

The mineral oil is e.g. turbine oil as specified by JIS K 2213 or machine oil as specified by JIS K 2238. The oil or fat is e.g. soybean oil, lard, beef tallow, etc. in an amt. 5-30 wt.%. The fatty acid ester is e.g. trimethylolpropane oleate, neopentyl glycol oleate or pentaerythritol

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oleate, etc. in an amt. 5-30 wt.%. The white solid lubricant is e.g. talc, mica, BN, polyfluoroethylene, polyethylene, etc. in an amt. 2-30 wt.%. The compsn. opt. contains a thickening agent (e.g. montmorillonite, polyisobutene, polyalkyl **methacrylate**, polystyrene, etc.), corrosion inhibitor, antioxidant, etc.

USE/ADVANTAGE - The **lubricant compsn.** has high lubricity for mitigating the **friction** between the plunger tip and the sleeve of a high speed type or high mould clamping force type casting machine. The compsn. contains no graphite which fouls the working environment.

0/1

FS CPI
FA AB
MC CPI: H07-B; M22-G

L56 ANSWER 8 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 1988-206764 [30] WPIDS

DNC C1988-092246

TI Heavy-duty **lubricant compsns.** - contain zinc salt of hydro-carbyl-substd. unsatd. carboxylic acid as dispersant-detergent.

DC A97 E12 H07

IN GUTIERREZ, A; LUNDBERG, R D; SCHETELICH, A A

PA (ESSO) EXXON CHEM PATENTS INC

CYC 4

PI EP 275658 A 19880727 (198830)* EN 10p

R: DE GB

JP 63218798 A 19880912 (198842)

EP 275658 B 19910612 (199124)

R: DE GB

DE 3770802 G 19910718 (199130)

CA 1295988 C 19920218 (199214)

JP 2756671 B2 19980525 (199826) 7p C10M129-93 <--

ADT EP 275658 A EP 1987-310947 19871211; JP 63218798 A JP 1987-307801 19871207; JP 2756671 B2 JP 1987-307801 19871207

FDT JP 2756671 B2 Previous Publ. JP 63218798

PRAI US 1986-941094 19861212

REP A3...8845; CA 1170247; No-SR.Pub; US 3271310; US 3428561

IC **C10M129-93; C10M161-00; C10N010-04; C10N030-04**

ICM **C10M129-93**

ICS **C10M161-00; C10N010-04; C10N030-04**

AB EP 275658 A UPAB: 19930923

Heavy duty lubricants comprise (a) a major amt.of lubricating oil, (b) 0.1-20 wt.% of a dispersant/detergent additive comprising the Zn salt of a hydrocarbyl-substd. mono-unsatd. mono- or dicarboxylic acid prepd. by reacting a polymer of a 4-10C monoolefin (no.-av. molecular wt. above 900) with a 4-10C mono-unsatd. acid and (c) a viscosity modifier.

The compsns. pref. comprise 1-16 wt.% viscosity modifier, 0.1-14 wt.% Zn-PIBSA (PIBSA = polyisobutenylsuccinate with a polyisobutenyl molecular wt. of 950-3000), 0.01-1.5 wt.% corrosion inhibitor, 0.01-1.5 wt.% antioxidant, 0.01-1.5 wt.% pour point depressant, 0.001-0.1 wt.% antifoam, 0.001-1.5 wt.5 antiwear agent, 0.01-15 wt.% **friction** modifier, balance mineral oil.

ADVANTAGE - The compsns. give good results in the Panel Coker and Caterpillar IG2 tests.

FS CPI
FA AB
MC CPI: A10-E03; A10-E21; A10-E23; A12-W02A; E05-L03C; H07-B; H07-G03; H07-G06

L56 ANSWER 9 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 1987-314953 [45] WPIDS

DNN N1987-235716 DNC C1987-133905

TI Poly alkylene glycol gel lubricants - esp. for cable lubrication.

DC A25 A97 H07 X12

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IN WEITZ, G C
 PA (AMPO-N) AMER POLYWATER CORP
 CYC 13
 PI EP 244733 A 19871111 (198745)* EN 16p
 R: AT CH DE ES FR GB IT LI NL SE
 AU 8772291 A 19871112 (198801)
 JP 63039990 A 19880220 (198813)
 US 4781847 A 19881101 (198846) 8p
 ADT EP 244733 A EP 1987-106126 19870428; JP 63039990 A JP 1987-110934 ✓
 19870508; US 4781847 A US 1986-859320 19860508
 PRAI US 1986-859320 19860508
 REP No-SR.Pub
 IC C10M173-02; C10N040-06
 AB EP 244733 A UPAB: 19930922
Lubricant compsns. comprise H2O and 0.5-25 wt.% of a polyalkylene glycol (I) with a molecular wt. of 200-15,000. The compsns. contain 0.5-10 wt.% (I), 0.5-2 wt.% of a viscosity modifier (II) and opt. 10-80 wt.% of a 1-6C alcohol (III) to depress the freezing point. (I) comprises 50-100 wt.% of a polypropylene glycol (PPG) with a molecular wt. of 400-4000 and 0-50 wt.% of a polyethylene glycol (PEG) with a molecular wt. of 200-15,000.
 (II) comprises 10-80 wt.% of a **polyacrylic acid** with a molecular wt. of at least 300 and (a) 20-90 wt.% of a polyethylene oxide with a molecular wt. of at least 300,000 and 20-90 wt.% of a cellulosic cpd., (b) 20-90 wt.% of an **acrylamide/acrylic acid** copolymer with a molecular wt. of at least 100,000, or (c) 20-90 wt.% of a cellulosic cpd. (III) is MeOH, EtOH, i-PrOH, ethyleneglycol, propylene glycol, amyl alcohol or n-hexanol.
USE/ADVANTAGE - The compsns. are useful for lubricating electrical and telephone cables to facilitate installation in conduits. The compsns. provide good lubrication under high and low loads, are easy to handle, apply and clean up, leave little residue on evapn., are slow to evaporate, provide effective dry lubrication, are freeze-thaw stable, can be pumped, have a long shelf life, are nonflammable and can be used in aq. environments.
 0/0
 FS CPI EPI
 FA AB
 MC CPI: A05-H01B; A12-W02; H07-A; H07-G06
 EPI: X12-G01A

L56 ANSWER 10 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
 AN 1987-129510 [19] WPIDS
 DNN N1987-096858 DNC C1987-053873
 TI **Lubricant compsn.** contg. hydrophilic polymer and surfactant - for lubricating intubation device for medical use.
 DC A25 A96 B07 D22 H07 P34
 PA (CHEO) CHESEBROUGH PONDS INC; (SHES) SHERWOOD MEDICAL CO
 CYC 7
 PI AU 8662497 A 19870326 (198719)* 22p
 EP 228762 A 19870715 (198728) EN 7p
 R: DE FR GB IT
 US 4705709 A 19871110 (198747) 6p
 EP 228762 B 19891123 (198947) EN
 R: DE FR GB IT
 DE 3667024 G 19891228 (199002)
 CA 1288089 C 19910827 (199139)
 ADT AU 8662497 A AU 1986-62497 19860908; EP 228762 A EP 1986-307341 19860924;
 US 4705709 A US 1985-781218 19850925
 PRAI US 1985-781218 19850925
 REP DE 2912852; EP 132387; US 3822238; US 3975350; US 4278633; US 4388076; US 4536179
 IC A01N001-02; A61L029-00; A61L031-00; A61M005-32; A61M025-00;
 C10M105-72; C10M107-40; C10M111-04;
 KATHLEEN FULLER EIC 1700 308-4290

C10M149-12; C10N040-00; C10N050-02

AB AU 8662497 A UPAB: 19930922

A **lubricant compsn.** (I) comprises A. a hydrophilic polymer, and B. a non-ionic or amphoteric surfactant in amount effective to reduce the coefficient of **friction** of (I) upon contact with water to less than 0.6 in less than 5 min. An intubation device (D) has a coating of (I) on at least a part thereof. A method of coating a device (D) comprises forming a solution of (A) and (B), applying to (D) to form a first coating, and then drying and curing.

Pref. (A) is a polyurethane derived from a polyethylene glycol, polypropylene glycol or polyalkylene amine, reacted with an isocyanate, e.g. toluene diisocyanate or methylene bis(cyclohexylisocyanate); alternatively (A) may be an alkyl or alkoxyalkyl ester or amide of **acrylic** or **methacrylic** acid. (A) is esp. a hydroxy-terminated hydrophilic polyurethane (A2) of average mol. wt. about 7500, which is the product of polyethylene glycol (mol. wt. 1890-1900) (C) and methylene bis(4-cyclohexylisocyanate) (E) reacted in presence of catalyst, e.g. stannous octoate. (B) is a linear alkyl sulphonate, alkylphenyl hydroxypolyoxyethylene, polyethylene glycol ether, or esp. octylphenoxy polyethoxyethanol (Triton X-100, RTM).

USE/ADVANTAGE - (D) is a tube or other device lubricated for insertion into a human or animal body; it may be a nasogastric or nasojejunal tube or stylet as described in US 4,388,076. A suitable nasogastric device is described. The coating is dry and non-slippery, but readily hydrates in contact with water and becomes lubricant, but retains sufficient mechanical strength to avoid being rubbed off.

0/4

FS CPI GMPI

FA AB

MC CPI: A12-V03B; A12-W02A; B04-C03C; B04-C03D; B10-A09B; B12-M09; D11-A01B2; D11-A03A; H07-G07; N05-A

L56 ANSWER 11 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 1987-062727 [09] WPIDS

DNC C1987-026461

TI **Lubricant compsn.** for chemical use and machine construction - contg. mineral oil mixt. and additives e.g. sulphurised plant fat derivs. poly alkyl **methacrylate** silicone oil, etc..

DC A97 E19 H07 M14

IN GIMPIEREA, M; IORDACHE, G; LUCA, M C; MARINESCU, C

PA (PETR-N) COMB PETROCH TELEAJ; (INGI-N) INST ING TEHN PRELUC RAF

CYC 1

PI RO 90286 A 19860930 (198709)*

ADT RO 90286 A RO 1985-117092 19850103

PRAI RO 1985-117092 19850103

IC C10M001-00

AB RO 90286 A UPAB: 19930922

The compsn. contains a mixt. of mineral oils and additives consisting of sulphurised vegetable fats, Zn dialkyl dithiophosphates, chlorinated paraffins, Ca- or Ba-sulphonates or phenolates, polyalkyl **methacrylate**, succinimide, alkyl naphthalene and silicone oil.

USE - The compsn. is useful in the chemical industry and machine construction. **Friction** cups are protected over a long time against wear, rust, corrosion and high pressures.

FS CPI

FA AB

MC CPI: A04-F06E3; A06-A00E; A12-W02A; E05-G09A; E05-L03D; E07-D03; E10-A09B8; E10-E02E; E10-G02H; E10-H02F; E10-J02B4; H07-B; H07-G02; H07-G04; H07-G07; M14-F01

L56 ANSWER 12 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 1985-273777 [44] WPIDS

DNC C1985-118921

TI Thermoplastic resin compsn. - comprises polyphenylene ether resin and
KATHLEEN FULLER EIC 1700 308-4290

polyamide elastomer.

DC A13 A23 A25

PA (DAIL) DAICEL CHEM IND LTD

CYC 1

PI JP 60186560 A 19850924 (198544)* 5p

JP 03074273 B 19911126 (199151)

ADT JP 60186560 A JP 1984-42361 19840306; JP 03074273 B JP 1984-42361 19840306

PRAI JP 1984-42361 19840306

IC C08L025-04; C08L071-04; C08L077-00

AB JP 60186560 A UPAB: 19930925

Thermoplastic resin compsn. comprises 100 pts. wt. (a) polyphenylene ether resin and 0.01-50 pts. wt. (b) polyamide elastomer.

Resin (a) is compsn. of (a1) polyphenylene ether and (a2) other resin component. Cpd. (a1) is, e.g., poly(2,6-dimethyl-1,4-phenylene)ether, poly(2-methyl-6-ethyl-1,4-phenylene)-ether, poly(2-methyl-6-propyl-1,4-phenylene) ether, 2,6-dimethyl-phenol-2, 3-6-trimethylphenol copolymer. Cpd. (a2) is pref. vinyl aromatic resins, e.g., polystyrene, poly(styrene-acrylonitrile) copolymer or rubber-reinforced(styrene-acrylonitrile) copolymer.

Cpd. (b) comprises 95-10, pref. 90-20 wt.% of hard segment consisting of e.g., above 6C aminocarboxylic acid, e.g., omega-aminocaproic acid or lactam, e.g., caprolactam or nylon salts, e.g., nylon 6.6, nylon 6.12, or nylon 12.10 and soft segment, e.g., poly(alkyleneoxide)-glycol, polycaprolactone polyol or polycarbonate polyol. The content of (b) is pref. 0.1-30, esp. pref. 0.5-15 pts. wt..

When the content of (b) is above 50 pts. wt., the compsn. has lower mechanical strength. The compsn. opt. contains lubricants, dispersing agents, stabilisers, pigments, flame retardants, etc..

USE/ADVANTAGE - The addition of (b) to (a) improves frictional abrading characteristics. The resin compsn. is useful for mouldings having sliding portions, e.g., piston, gear, switch, etc..

/0

FS CPI

FA AB

MC CPI: A05-F01B; A05-F01E2; A05-H07; A07-A03; A08-M09; A12-H10

L56 ANSWER 13 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 1985-171044 [28] WPIDS

DNC C1985-074797

TI Lubricant compsn. contg. friction reducer - comprising hydroxy-alkoxy acid amide of alkyl amine.

DC E16 H07

IN SCHLICHT, R C

PA (TEXC) TEXACO INC

CYC 1

PI US 4525288 A 19850625 (198528)* 4p

ADT US 4525288 A US 1983-523242 19830815

PRAI US 1983-523242 19830815

IC C10M001-32

AB US 4525288 A UPAB: 19930925

A lubricant compsn. is claimed comprising a lubricating oil contg. the following additives in conventional amounts; an alkenyl succinimide, an overbased Ca sulphonate, a poly-ethoxylated alkylphenol, a zinc dialkyl dithiophosphate, a diarylamine, a polymethacrylate, an olefin copolymer and a silicone antifoamant. The novelty is the inclusion of a friction-reducing amount of a hydroxyalkoxyamide of formula R-NH-CO-(CH₂)_n-O-(CH₂)_m-OH (Ia): R=12-18C alkyl, pref. oleyl; m=1-10, pref. 2; n=1-10, pref. 1.

USE - Cpd. (I) are useful as friction-reducing additives in fuels and lubricatns.

0/0

FS CPI

FA AB
MC CPI: E10-D03D; H07-A

L56 ANSWER 14 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1984-019266 [04] WPIDS
DNC C1984-008057

TI Graphite fluoride lubricant partly defluorinated by radiation - has reduced **friction** coefft. and is more compatible with resins and oils..

DC A97 E36 H07
IN KITA, Y; MOROI, S; NAKANO, H; SAKANOU, A
PA (CENG) CENTRAL GLASS CO LTD
CYC 4

PI DE 3325675 A 19840119 (198404)* 22p
FR 2530263 A 19840120 (198408)
JP 59016273 A 19840127 (198410)
JP 59018107 A 19840130 (198410)
JP 59018108 A 19840130 (198410)
US 4500678 A 19850219 (198510)
DE 3325675 C 19860528 (198622)
JP 01043682 B 19890922 (198942)
JP 02061519 B 19901220 (199104)
JP 03043749 B 19910703 (199130)

ADT DE 3325675 A DE 1983-3325675 19830715; FR 2530263 A FR 1983-11816 19830718; JP 59016273 A JP 1983-88946 19830715; JP 59018107 A JP 1982-125370 19820719; JP 59018108 A JP 1982-88947 19820716; US 4500678 A US 1983-514792 19830718; JP 01043682 B JP 1983-88947 19820716; JP 02061519 B JP 1982-125370 19820719

PRAI JP 1982-125370 19820719; JP 1983-88946 19820716; JP 1983-88947 19820716

IC C01B031-04; C10M001-10; C10M003-02; C10M005-02;
; C10M007-02; C10M009-00; C10M103-02;
C10M125-18; C10N030-06; C10N050-08; C10N070-00; H01M004-58

AB DE 3325675 A UPAB: 19930925

A lubricant (I) is obt'd. pref. from (CF)_n or (CF₂)_n, by dispersing in a dispersion medium, irradiating with electromagnetic radiation, and collecting the partly defluorinated prod.

The particle size of the initial graphite fluoride is pref. 0.01-100 micron. The dispersion medium is e.g. ethanol, acetone, aq. solns. of KOH, NaOH or surfactant or NH₃ gas. Pref. 0.01-50 % (esp. 0.1-10%) of the F in the initial material is removed. The wavelength of the radiation is pref. 1-0.001 micron. Compsn. can be made from (I) and e.g. phenolic resins, polyimides, polyamides, polyethylene, polymethyl **methacrylate** and fluoropolymers. Liq. **lubricant compsns.** can be made from (I) and paraffinic or naphthenic mineral oil, silicone soils and fluorine-contg. oils. Lubricating greases can be made from (I) and a mineral oil- or silicone-grease.

Compared with the starting material, (I) shows reduced coefft. of **friction**, (e.g. 0.08 instead of 0.13); and improved capability with resins, lubricating oils, greases, etc., giving compsns. of improved lubricating properties. Compsns. based on resins show improved mouldability.

0/0

FS CPI
FA AB
MC CPI: A08-M03; E31-N05; H07-D; H07-G

L56 ANSWER 15 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1983-814553 [45] WPIDS
DNC C1983-110207

TI Lubricating oils contg. solid lubricant - and dispersant-viscosity index improver.

DC A97 H07
IN DEJOVINE, J M; DEVRIES, D L

KATHLEEN FULLER EIC 1700 308-4290

PA (ATLF) ATLANTIC RICHFIELD CO

CYC 1

PI US 4411804 A 19831025 (198345)* 15p

PRAI US 1976-752225 19761220; US 1978-893098 19780403; US 1978-893101
19780403; US 1978-913183 19780606

IC C10M001-12

AB US 4411804 A UPAB: 19930925

Lubricant compsns. characterised by their ability to reduce **friction** in IC engines without exhibiting unacceptable deposit-forming tendencies comprises (a) a major amt. of lubricating oil, (b) 0.1-2 wt.% of solid particles of a lubricant selected from graphite, MoS₂, ZnO and their mixts. and (c) 3-10 wt.% of at least one dispersant/VI improver. The parent patent relates to similar compsns. in which component (c) is a copolymer of an alpha,beta-unsatd. acid or anhydride and an olefin.

The (c):(b) ratio is pref. at least 2.5:1, esp. at least 3:1. Suitable components (c) include copolymers of N-vinylpyrrolidone and **acrylate** esters, reaction prods. of oxidised ethylene/propylene copolymers and amines, and EPDM/dialkylaminoalkyl **methacrylate** graft copolymers.

0/0

FS CPI

FA AB

MC CPI: A12-W02A; H07-G03; H07-G06; H07-G08

L56 ANSWER 16 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 1983-43936K [18] WPIDS

DNC C1983-042848

TI Sulphurised transesterified tri glyceride **compsns.** - useful as **lubricant** and fuel additives.

DC H06 H07

IN DENHERDER, M J; KAMMANN, D P; WAGNER, T L

PA (FECO) FERRO CORP

CYC 1

PI US 4380498 A 19830419 (198318)* 7p

PRAI US 1981-291544 19810810

IC C10L001-18; C10M001-20

AB US 4380498 A UPAB: 19930925

Additive omsns. comprise a sulphurised transesterified triglyceride(I) in which the total acid component includes 5-50 mole % of polybasic carboxylic acids (II).

(II) are pref. 3-36C (esp. 21-36C) dibasic acids, esp. dimerised linoleic acid or a dimerised prod. of linoleic and **acrylic** acids, or a mixt. of 3-54C (esp. 21.54C) di- and tribasic acids, esp. dimers and trimers of linoleic acid.

The **compsns.** are esp. useful as **lubricant** additives, giving improved EP and antiwear properties, reducing **friction**, lowering pour point and reducing deposit and varnish levels. They may also be used in motor fuels to reduce engine wear and deposits, and in fuel oils to lower pour point and improve fuel pump lubrication. They have better solubility in non-aromatic and synthetic oils than sulphurised fatty oils.

FS CPI

FA AB

MC CPI: H06-B; H07-G08

L56 ANSWER 17 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 1983-26137K [11] WPIDS

DNN N1983-047448 DNC C1983-025599

TI **Lubricant compsn.** for hot rolling of steel - contains graphite powder and phenol resin.

DC A18 A21 A97 H07 M21 P51

PA (YAWA) NIPPON STEEL CORP

CYC 1

PI JP 58019396 A 19830204 (198311)* 3p
 PRAI JP 1981-118174 19810728
 IC B21C023-32; **C10M007-04**
 AB JP 58019396 A UPAB: 19930925

Lubricant comprises graphite powder and phenol resin (1-50 wt.% of the graphite) or an aq. dispersion prepd. by suspending graphite powder, phenol resin (1-50 wt.% of graphite) and dispersing agent (0-20 wt.% of graphite) in H2O.

Specifically the phenol resin is coated onto the heated steel hot-rolling members to form a lubricating coating. The dispersing agent provides stable aq. dispersion of graphite powder and the resin. It is typically acacia gum, alginic acid, starch, dextrin, MC, CMC, PVA, **polyacrylate** salt, surface active agent, colloidal silica or bentonite.

Compsn. forms film which is adhered firmly and resistant to the dry **friction** of hot rolling members.

FS CPI GMPI
 FA AB
 MC CPI: A05-C01; A12-W02A; H07-D; H07-X; M21-A06

L56 ANSWER 18 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 1983-26136K [11] WPIDS

DNN N1983-047447 DNC C1983-025598

TI Lubricant for hot rolling of steel - comprises graphite powder and polyamide resin or their aq. dispersion.

DC A18 A23 A97 H07 M21 P51

PA (YAWA) NIPPON STEEL CORP

CYC 1

PI JP 58019395 A 19830204 (198311)* 3p

PRAI JP 1981-118173 19810728

IC B21C023-32; **C10M007-04**

AB JP 58019395 A UPAB: 19930925

Lubricant comprises graphite powder and polyamide resin (1-50 wt.% of the graphite) or an aq. dispersion prepd. by suspending graphite powder, polyamide (1-50 wt.% of the graphite) and a dispersing agent (0-20 wt.% of the graphite) in H2O. The **lubricant compsn.** forms film stuck firmly and durable by subjecting dry **friction** of hot rolling members.

Pref. polyamide resin is applied onto heated steel hot-rolling members to form a coating. The dispersing agent provides stable aq. dispersion of graphite powder and the resin. It is typically acacia gum, alginic acid, starch, dextrin, MC, CMC, PVA, **polyacrylate** salt, surfactant, colloidal silica or bentonite. The dry compsn. is coated on such steel members by immersing the heated members in the fluidised mixt. The aq. dispersion is coated on such steel members by spraying it and heated to form a coating.

FS CPI GMPI
 FA AB
 MC CPI: A05-F01E; A12-W02; A12-W02A; H07-D; H07-X; M21-A06

L56 ANSWER 19 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 1982-02143J [47] WPIDS

TI Crankcase lubricants contg. additive package - including N-alkyl-glycine deriv. to reduce **friction**.

DC A97 E19 H07

IN CULLEN, W P; LEVINE, S A; SUNG, R L; ZOLESKI, B H

PA (TEXC) TEXACO INC

CYC 1

PI US 4358385 A 19821109 (198247)* 8p

PRAI US 1981-291581 19810810

IC **C10M001-48**

AB US 4358385 A UPAB: 19930915

Crankcase **lubricant compsns.** having a total base no. (TBN) of 5-40 comprise a mineral lubricating oil contg. (a) 0.1-5 wt.% of
 KATHLEEN FULLER EIC 1700 308-4290

an overbased Ca sulphonate; (b) 0.1-1 wt.% of a Zn dithiophosphate of formula $((RO)_2P(S)_2)_2Zn$ (where R is an opt. OH-substd. 4-12C hydrocarbyl gp.); (c) 0.025-1 wt.% of an ethoxylated alkylphenol of formula $Ar(CH_2CH_2O)_nH$ (where Ar is phenyl monosubstd. by 4-20C alkyl and $n = 4-30$); (d) 0.05-1 wt.% of an alkylated diphenylamine of formula $Ar_1-NH-Ar_2$ (where Ar_1 and Ar_2 are R1-substd. 4-R2-phenyl gps.; R1 is 1-4C alkyl; R2 is 4-16C alkyl); (e) 0.5-10 wt.% of a succinimide dispersant of formula (I) (where R is 50-200C alkenyl and $y = 0-10$).

Compsn. further comprises (f) 0.25-2.5 wt.% of a **polymethacrylate** of formula (II) (sic; where R is a 1-20C aliphatic radical and $n = 600-35,000$); (g) 0.5-10 wt.% of an ethylene/propylene copolymer with a mol. wt. of 20,000-50,000; and (h) 0.1-5 wt.% of an N-alkylglycine deriv. (I) of formula $RNHCH_2CONHR'R''$ (Ia) or (Ib) (where R is 10-25C hydrocarbyl; R' is H or 1-5C alkyl, hydroxyalkyl or aminoalkyl; R'' is 1-5C alkyl or hydroxyalkyl or $(CH_2CH_2NH)_xH$; $x = 1-3$; X is O or NR').

The compsns. are esp. useful for lubricating medium- and high-speed diesel and gasoline engines. Inclusion of (I) improves fuel economy by reducing engine **friction**.

FS CPI

FA AB

MC CPI: A04-F06E; A04-G06; A12-W02A; E05-B01; E05-G; E05-L03D; E07-D03; E07-D09; E07-E01; E10-B01C; E10-B02D; E10-E04M; H07-B; H07-G07

L56 ANSWER 20 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 1981-92464D [50] WPIDS

TI Lubricating oil for pneumatic perforators - contg. zinc di alkyl-di thio-phosphate, poly-methyl siloxane and acid ester of alkenyl-succinic acid.

DC A18 A26 A97 H07

IN BADYSHTOVA, K M; IVANKINA, E B

PA (SHCH-I) SHCHEKURIN O O

CYC 1

PI SU 810766 B 19810310 (198150)* 3p

PRAI SU 1979-2757245 19790425

IC C10M001-18

AB SU 810766 B UPAB: 19930915

Addn. of Zn dialkyl dithiophosphate (I), polymethyl siloxane (II) and acid ester of alkenyl succinic acid (III) to, and use of alkenyl succinimide (IV) as emulsifier in the **lubricant compsn.** for the pneumatic perforators, improves its anticorrosion, antiwear etc. characteristics.

The mixt. contains (in wt. %): (I) 1-3, (II) 0.005-0.01, (III) 0.1-0.15, (IV) 0.1-0.2, polyisobutylene (V) 0.5-2 and mineral oil (VI) the rest, and (V) used has mol. wt. of 900-15000. The comps. may also contain 0.3-0.6 wt. % polymethyl **methacrylate** as depressant. Addn. of (I)-(III) and use of (IV) reduce the consumption of the lubricant by 25% and **frictional** wear of the instrument by 1.5 times.

FS CPI

FA AB

MC CPI: A06-A00E; A12-W02A; H07-B; H07-G

L56 ANSWER 21 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 1979-73716B [41] WPIDS

TI Fatty alcohol derived tert. butyl ether fibre lubricants - have low **frictional** coefft., low viscosity and high heat-stability.

DC A60 E17 F06

IN BILLENSTEI, S; KLEBER, R

PA (FARH) HOECHST AG

CYC 6

PI DE 2812444 A 19791004 (197941)*

GB 2017749 A 19791010 (197941)

JP 54134199 A 19791018 (197948)

FR 2420595 A 19791123 (198002)

KATHLEEN FULLER EIC 1700 308-4290

US 4261839 A 19810414 (198118)
GB 2017749 B 19830202 (198305)
IT 1112961 B 19860120 (198721)
PRAI DE 1978-2812444 19780322
IC C07C043-03; C10M003-14; D06M013-18
AB DE 2812444 A UPAB: 19930901
Tert. butyl ethers having formula R1-O-CMe2 (2) (where R1 is linear or branched 12-22C alkyl or alkenyl) are used as **lubricants** in fibre finishing **compsns.** Fibre finishes consisting of or contg. (I) are claimed. (I) can be used as aq. emulsions contg. 10-30 wt.% (I). Active (I) concn. on fibre may be 0.3-2 (0.4-0.8) wt.%.
(I) are used in finishing natural and synthetic fibres, esp. cotton, polyester, polyamide or **polyacrylonitrile.** The **frictional** coefft. of (I)-contg. compsns. is low. (I) do not turn yellow after heating and are low-viscosity colourless liqs. (I) swell neither the polyurethane of texturising rollers nor polyolefin fibres.
FS CPI
FA AB
MC CPI: A08-M03; A12-S05S; E10-H01; F01-H06

L56 ANSWER 22 OF 22 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1968-89576P [00] WPIDS
TI **Lubricant compsn** for reducing **friction** in **conveyor.**
DC A00
PA (DOWC) DOW CHEM GMBH
CYC 1
PI US 3336225 A (196800)*
PRAI US 1966-520904 19660117
AB US 3336225 A UPAB: 19930831
Lubricant compsn. for reducing **friction** in **conveyor** belts is obtained by incorporating 0.0002 - 0.01 wt.% of a water soluble, cationic **acrylamide** polymer having a mol. wt. of at least ca. 500,000 and at least 50 mole % **acrylamide** moieties in the aq. amine, alkali metal, or ammonium soap solution.
Superior reduction in **friction.**
FS CPI
FA AB
MC CPI: A04-D04; A12-H01; A12-W02